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# Manitoba Medical Review



**STACKS**

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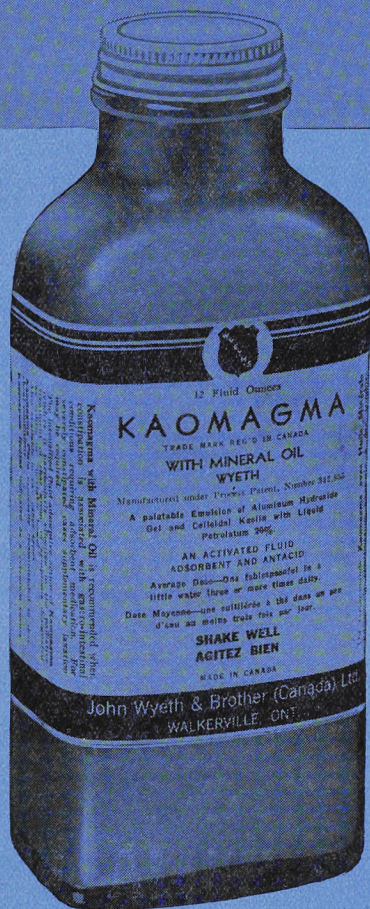
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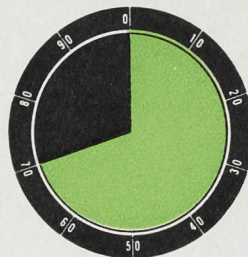
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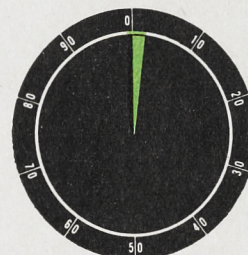
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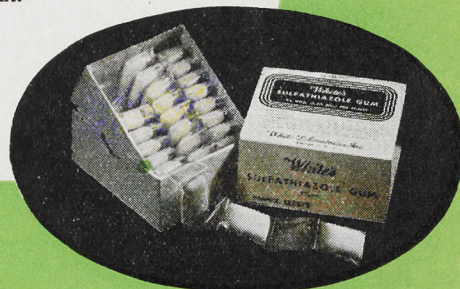


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## Diagnosis and Treatment of Pulmonary Embolism

S/L D. P. Murnaghan, R.C.A.F.

As commonly taught, pulmonary embolism is a dramatic episode which occurs some 8 to 12 days after an operation when the physician, his patient and relatives are satisfied that convalescence is proceeding satisfactorily. The resultant embarrassment to the patient's circulation may terminate his life or provide a serious setback temporarily impeding his recovery. My purpose here is to extend that picture and to present what I believe are valuable diagnostic aids; then measures to insure that a patient is not exposed to the hazard; and lastly to discuss treatment once the episode has occurred.

In large series of autopsies pulmonary embolism has been described with an over-all frequency of 2-3%.<sup>1</sup> Belt's figure of 6-5% is probably on the high side for all age groups. Perhaps somewhere in between would give a more realistic picture of its frequency. It is a complication in many patients confined to bed primarily because of heart disease; these rival in frequency the post-operative frequency, but occur in an older age group. It occurs in patients confined to bed for various medical or surgical reasons, as diverse as measles, fracture or confinement. Not altogether unusual is its occurrence in ambulatory patients, sometimes in those who have varicose veins, yet perhaps as often no particular reason can be detected.

For clinical purposes I choose to divide Pulmonary Embolism into:

- (a) Those rapidly fatal (fatal).
- (b) Those that recover from the immediate episode (non-fatal).

For the former we have measures of prevention to offer, once it has occurred remedial therapeutic steps are obviously, by definition, useless.

For the latter diagnosis and treatment are both important; prophylaxis occupies a dominant position, for here especially is not an ounce of prevention worth a ton of cure?

Pulmonary embolism may present a wide variation in symptomatology, dependent on whether acute cor pulmonale, collapse and shock, or pleuritic signs predominate first. To review the signs and symptoms briefly, the outstanding clinical feature is the sudden onset of dyspnea or oppressive anterior thoracic pain, with or without a feeling of faintness accompanied by rapid shallow respirations and tachycardia. There may be evidence of increased venous pressure with cyanosis, distended neck veins, and an increased pulmonic second sound. Should shock and collapse predominate the patient is cold and clammy with a fall in blood pressure

and the pulse is fast and weak. One sometimes sees a patient that passes from a state of increased venous pressure into a state of shock. In this particular circumstance lies the close simulation between some cases of pulmonary embolism and acute coronary occlusion. At the beginning, or later with the development of pulmonary infarction, the accompanying pleuritis produces pain in the chest on breathing, located at one side or the other or in the scapular or shoulder region, depending upon the location of the infarct. Extending thrombosis in the pulmonary arterial bed is now recognized to cause symptoms indistinguishable from pulmonary infarction from peripheral emboli; this condition may follow classical infarction and be misinterpreted for repeated embolisation from a distant source. Anti-coagulant therapy practically eliminates spreading thrombosis in the minor pulmonary artery branching.

### Diagnostic Factors May Conveniently Be Divided Into:

#### (1) Clinical Aids; (2) Laboratory Aids

**Clinical**—Of these (a) the type of onset may be dramatic — with cyanosis, precordial oppression, sweating and dyspnea or with pleural pain, perhaps radiating to the shoulder region.

(b) The pulse, temperature and respiration rate are nearly always elevated. If the episode occurs during a quiet post-operative convalescence the clinical chart is available to show this.

(c) Physical examination of the chest is of variable help, dependent upon the available co-operation of the patient, the duration elapsed since the onset of his embolism and the particular nature of that onset. Relative dullness with diminished air entry in a part of one lower lobe, a pleural friction rub or persistent rales may be present. More practical is evidence of distended neck veins. Examination of the heart has no characteristic diagnostic feature of pulmonary embolism. A gallop rhythm and a basal pericardial scratch may be found as part of the well developed clinical picture of Acute Cor Pulmonale if this be present.

(d) The evidence of venous thrombosis in the lower extremities should always suggest the diagnosis of pulmonary embolism if the course of events point to a pulmonary complication. It is here that prophylaxis is most important. Clinically one looks for pain in the calf or groin, slight swelling by measurement, edema or cyanosis, especially on dependency and a positive Homan's sign.



(e) The previous history of the patient is considered important, whether the patient is in the 5-12th day post-operative period, a cardiac or other condition at bed rest, etc.

(f) The history of a recent pulmonary episode is frequently diagnostic for a second episode; the second one is often fatal; a patient rarely survives a third one.

(g) The sudden occurrence of auricular fibrillation or flutter in a patient with heart disease may result from a pulmonary embolism.

#### Laboratory Aids

(1) The W.B.C. becomes elevated quickly; a count of 15,000 to 18,000 is frequently seen.

(2) Electrocardiography has a definite place in the diagnostic endeavour. A pathognomonic picture for acute or cor pulmonale was first described by McGinn and White;<sup>2</sup> sufficient evidence has since accumulated to confirm their observation. The characteristic appearance consists of the transitory development of an S wave in lead I; depression of the ST take-off in lead II followed by a low upright or diphasic T wave; a moderately deep Q wave, slight convexity of the ST segment followed by a negative T wave in lead III; a diphasic or more often an inverted T wave in lead IV. The S wave is often larger than the R wave in the lead CF<sub>1</sub>, consistent with right ventricular dominance in that position. Pulmonary embolism of varying severity may occur in the presence of coronary or rheumatic heart disease, in itself the factor in producing an abnormal tracing, or it may not be severe enough to produce strain on a normal heart, hence the characteristic picture is not always to be expected. Taking the many circumstances surrounding the clinical picture into account, including the frequent delay in recording an electrocardiogram, the pathognomonic tracing is only seen in approximately 10% of cases.<sup>3</sup> In about one half of all cases serial tracings provide important diagnostic clues. I feel that the percentage of helpful records would be increased were it possible to obtain electrocardiograms earlier.

An episode of pulmonary embolism may secondarily induce myocardial ischemia in a heart already the seat of coronary artery disease, with consequent electrocardiographic alterations. The latter may in turn return to the original form if the patient recovers. This does not alter the concept of a pathognomonic picture in acute cor pulmonale, which is caused by acute distension of the right ventricle. It was essentially this error in interpretation that led to controversial opinions on the value of the E.C.G. in the diagnosis of pulmonary embolism. In the differential diagnosis of the E.C.G. coronary thrombosis with resultant posterior myocardial ischemia or infarction is the one alternative to be distinguished.

(3) An X-Ray of the chest may be valuable, even diagnostic of pulmonary infarction, so it

should be obtained where it is practical to do so. It must be recognized, however, that the appearance of an infarct by roentgen examination is variable in respect both to its form and density. The opacity may be triangular in shape with its base on the diaphragm or in the costophrenic angle; perhaps the more characteristic densities have a dome-shaped upper surface, and this may appear convex towards the hilus of the respective lung. The density is the result of edema, the accumulation of cells in the alveoli and the absence of air. If resolution occurs rapidly the X-Ray opacity may have disappeared within 96 hours. It is appropriate to add here that an X-Ray shadow or density may not appear for 36 to 48 hours following the episode. Confusion of the formed shadow with atelectasis or an area of pneumonia is quite easy; secondary malignant deposits are usually circular and multiple.

Of these two laboratory aids an Electrocardiogram can be done with least discomfort to the patient. While it may provide diagnostic evidence in the first 24 hours, X-Ray offers its most effective aid from the second to the fourth day. The principal differential diagnosis of pulmonary embolism in its acute stage is from coronary occlusion. Pneumonia, lobar or atypical, pleurisy and atelectasis form the problem of differentiation from infarction. A bloody sputum is a characteristic of the latter, but not seen as often as authors indicate.

#### Treatment

"A stitch in time saves nine" — is our motto. Prophylaxis is widely recognized by surgeons and obstetricians, internists and general physicians have lagged behind their comrades in this respect. Now since the latter are more conscious of the condition, they have out-stepped some of our colleagues in methods of prevention. In the past the former group have learned the tragedy of a fatal embolism in the younger patient in the full bloom of development; the latter have seen the life of an elderly patient come to an premature close through complications variously described as "congestion of the lungs" or "bronchopneumonia." As the lives of these older patients are protected through our modern knowledge the geriatric problems among them will remain to keep us occupied.

General prophylaxis consists of measures designed to promote the blood flow and prevent pooling in the lower extremities of patients in bed, for it is well known that in venous thrombosis there is the precursor of most pulmonary emboli. Venous thrombosis elsewhere is also recognized to be a source of thrombi which are sometimes delivered to the pulmonary circulation. These consist of (1) movement of the patient in bed at regular intervals throughout the day and encouragement of deep breathing exercises designed to aerate the lower portions of both lower lobes. Leg movement is an important part of general nursing care of a bed



patient; (ii) raising the end of the bed promotes venous return (post-operatively, etc.); (iii) early post-operative rising; no extremes are urged; (iv) preservation of normal fluid balance; (v) daily observation of the patient's legs and an attentive ear to his complaint of aching in his calf muscles. The latter shouldn't be dismissed as a cramp without further ado; (vi) the position of an obstetrical or gynecological patient with its acute angulation of the limbs at the groin and knee predisposes to phlebo-thrombosis. It were well that the stirrups of some tables be scrapped for bullets more lethal than fragments of a thrombus.

Particular prophylaxis is directed towards the peripheral veins, especially in the presence of venous thrombosis. If such is recognized the femoral vein should be ligated and divided below the entrance of the profunda tributary. Any clot present is sucked out gently. If an infarct has already occurred and no thrombus is found on the first side chosen, the operation should be repeated on the opposite side. In deciding upon the first extremity it is recommended by some that the vein be ligated on the side where symptoms have not yet progressed to indicate thrombo-phlebitis. This may be a difficult decision, even impossible. Here clinical judgment and perhaps individual experience is the deciding factor. The operation is performed under local anaesthesia with little trouble to the patient. Resultant discomfort in the re-establishment of channels for venous return is reported to be less than was anticipated. More ambitious surgeons do not hesitate to tie the external iliac vein, even the common iliac if needs be. Whether venous ligation alone is sufficient for phlebothrombosis before an embolus is released is still debated.<sup>4</sup> There are reasonable arguments for and against it. Personally, I would combine it with dicoumarol therapy controlled by prothrombin estimations. Anti-coagulant therapy is definitely urged once pulmonary embolism has occurred.

On the question of anti-coagulants alone there is divided opinion. Some surgeons routinely use dicoumarol post-operatively. This is certainly not an ideal practice and is not encouraged. In the presence of thrombophlebitis anti-coagulants are definitely indicated — heparin or dicoumarol. Venous ligation, a para-sympathetic lumbar block, and penicillin or sulphonamide are the associated measures.

One frequently sees a superficial phlebitis in a lower limb following a continuous intravenous infusion. It subsides as a rule with conservative measures. Venous ligation is indicated should evidence of deep vein thrombosis or phlebitis develop or with spread of the superficial phlebitis to the level of the saphenous opening (fossa ovalis).

The treatment of pulmonary embolism is an urgent matter. Prompt institution of therapy may save a life before it fails from cardiac failure. In

this regard, it is suggested that just as precautions are taken to prevent avoidable deaths in the event of fire, in every ward of an active hospital, there should be readily available to responsible persons the necessary items to protect a life from the unpredictable tragedy of embolism. Because the venous return to the right side of the heart is impaired in this condition, drugs given by hypodermic injection may not act rapidly enough. Atropine gr. 1/50 with papaverine gr. ½ to gr. 1 intravenously is recommended for the acutely ill, with dosage lessened for the less acute cases. This provides sedation and the relief of coronary artery and pulmonary artery spasm which are considered to be present. Oxygen by nasal catheter or mask is urgently needed by these patients. The oxygen tent is optimal for them, but one shouldn't deprive them of the oxygen which can be given by nasal catheter until such arrangements have been made to provide for a tent. Ideally papaverine gr. ½ and atropine gr. 1/75 hypodermically is then given every 3-4 hours as indicated. Complete bed rest in the sitting posture completes the immediate care.

It is important to establish the diagnosis as soon as possible; unnecessary movement of the patient adds to his tribulation, so frequent examinations are to be avoided. By the suggestions outlined one can often make the correct diagnosis. Essentially the same treatment is given for acute coronary occlusion, so nothing is lost thereby. Patients are more comfortable propped up unless the state of shock is superimposed. Intravenous fluids are to be discouraged in the early stage as they only add to the circulatory embarrassment already present. Digitalisation by the rapid method is considered advisable by some writers on this subject. It is of real value in those cases where cardiac failure is imminent or has already been precipitated; it is indicated in a person over 50 years where auricular fibrillation or flutter has been precipitated by the pulmonary embolus. For the others its value is debatable. The leg veins must be examined and explored at the groin if there is any suggestive evidence favoring phlebo-thrombosis.

In those cases where from the onset local symptoms and signs in the chest predominate the correct diagnosis is of importance. Sulphonamides are of no proven value; in prognosis the condition is slower to disappear than pneumonia. The real hazard lies in recurrence, for often the second episode is fatal. The treatment of pulmonary infarction without acute cor pulmonale or shock therefore is reduced to preventing a second one, hence to ligation and division of the femoral or other offending limb veins in the majority of cases. Should this fail to prevent a second episode recourse to heparin anti-coagulant therapy with concurrent use of dicoumarol is always indicated.



As said before some authors urge anti-coagulant therapy once thrombosis is recognized. Pulmonary embolism has recurred following cessation of anti-coagulant therapy even when it was continued for as long as 21 days—so that this therapeutic measure is not a complete safeguard.

In conclusion—one realizes that the symptomatology of non-fatal pulmonary embolism is varied; it is possible nevertheless to make the correct diagnosis in many cases. Although the electrocardiogram and roentgen ray are helpful assets, even diagnostic at times, the results always require expert interpretation, a service not always readily available. Immediate treatment as outlined should be instituted as soon as possible; to this end the materials should be readily available in an active treatment hospital. Controlled dicoumarol therapy with venous ligation and division of the femoral

veins usually below the entry of the profunda branch, is the treatment recommended to prevent the passage of dislocated or broken ends of thrombi reaching the pulmonary anterior or its branches. In promoting this operation, physicians have found some surgical colleagues hesitant. I hope that through our co-operative team work in diagnosis and treatment, we will preserve some patients' lives for better days.

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## Rupture of the Uterus

By W. F. Abbott, M.D.

Rupture of the uterus is fortunately an uncommon event, but still by no means a rarity. Probably a fair estimate of occurrence might be about one in each thousand. It is listed as a complication of labour. Probably a fairer statement would be, that it is a catastrophe of labour and usually the result of mismanagement or neglect to notice or appreciate obvious signs of uterine distress.

It may be classified as complete or incomplete, depending on whether the rupture involves all or part of the uterine wall. A more useful division, from a clinical point of view, is:

(a) **Intra-Peritoneal**, nearly always starting in the lower uterine segment and extending upward into the more muscular portion or fundus uteri. The incomplete form here may go unrecognized, unless exploration of the uterine cavity or abdomen is indicated from symptoms arising during or after delivery.

(b) **Extra-Peritoneal**, always starting in the cervix or lower uterine segment and involving the vaginal vault or the space in either broad ligament. A combination of the two may occur. The intra-peritoneal type is usually due to uterine force and contraction, and the extra-peritoneal form to operative trauma and exploration.

### Causes of Uterine Rupture

#### 1. Spontaneous.

##### (a) Abnormal Weakness of the Uterine Wall.

This may occur after repeated pregnancies, especially if occurring with short intervals of rest between succeeding labours. An important factor here is the weakness and laxity of the supporting abdominal wall, which allows the uterus to become anti-flexed or assume a position of obliquity. The forces of labour are not directed in the desired direction at the pelvic brim and thus an actual

obstruction to proper engagement of the present part is constituted.

The usual sense of security in which the average multipara is allowed to proceed in labour, may thus be rudely shattered. Other conditions that definitely produce some weakness of the uterine wall is over-distension from twin pregnancies or the presence of marked hydramnios; also the infiltration of the uterine wall that occurs in Avoidable Hemorrhage (or premature separation of the normally situated placenta) may be a factor in rupture through the placental site caused by the associated tonic contractions that usually follow. A uterine scar, from a previous myomectomy or Caesarian section, must be viewed with grave concern.

(b) **Obstructed Labour.** The cause is immaterial, whether from disproportion, false position or presentation, pelvic contraction, tumors or any factor which prevents descent of the presenting part through the rigid pelvic brim. After repeated strong uterine contractions the fundal portion of the uterus becomes thicker and the lower uterine segment becomes correspondingly thinned out. This is due to the property of the uterine muscle to contract and retract, or retain some of its contraction. As a result, most of the muscular tissue becomes fundal in location and the lower segment may retain little beyond peritoneum and connective tissue. A fundal thickness of several centimeters and a lower uterine segment thickness of but a few millimeters is not uncommon. This is clinically indicated by a line of demarcation (Bandl's Ring) which is both visible and palpable through the abdominal wall and must be recognized and heeded. Always remember that any difficult labour produces this line of demar-



cation to some extent, and its clinical significance must be accurately and individually estimated in every such labour. In such cases the rupture is nearly always complete in the lower uterine segment and intra-peritoneal.

(c) **Precipitate Labour.** Here dilation of the cervix does not keep pace with the force exerted from above, and tearing of the lower uterine segment of cervix must, of necessity, follow. This complication may be greatly augmented by the injudicious use of Pituitary extract.

## 2. Operative Rupture.

The causes are many here. A few of the more common are:

(a) Any intra-uterine manipulation (as podalic version) after tonic or prolonged uterine contractions, when the lower uterine area must, of necessity, be thinned out and insecure.

(b) Attempts to deliver extended legs or arms in breech delivery.

(c) Introduction of the hand, or forceps, through a partially dilated cervix.

(d) Pulling the presenting part through the cervix before it is dilated, either in breech extraction or by forcep delivery. The same effect is produced by Pituitary extract in the second stage of labour. The only difference is "push" instead of "pull" before the passage is suitably dilated.

(e) Forcible application of forceps, especially in the upper pelvic area. They may injure the cervix, posterior part of the lower segment or be actually applied outside the cervix.

(f) Excessive force used in fundal pressure on an "after-coming head" in breech extraction. I have seen this happen on two occasions.

### Symptoms of Uterine Rupture

Only the symptoms of intra-peritoneal rupture will be discussed. Extra-peritoneal damage with evident cervical injury and external hemorrhage are so obvious and the treatment so definite that mistakes can hardly be considered excusable.

The signs and symptoms of intra-peritoneal rupture may be listed as:

Usually a **sudden severe tearing** sensation in the lower abdomen.

**Hemorrhage**—Usually severe, intra-peritoneal and concealed, and therefore only recognized by the signs of severe loss of blood.

**Shock**—Moderate or marked, and varying considerably in its rapidity of development.

**Cessation of Uterine Contractions**—Especially if the foetus is expelled into the abdominal cavity.

Palpitation of foetal parts, evidently immediately under the abdominal wall and not covered by the usual uterine wall. Also the independent uterine body can nearly always be isolated.

Loss of foetal movement and heart sounds, in practically all cases.

Disappearance of the vaginal presenting part if the foetus is expelled into the free abdominal cavity.

The development of generalized abdominal pain and distension (usually gradual) from the irritation of intra-peritoneal free blood—Blood in the enclosed broad ligament, which invariably spreads extra-peritoneally along the pelvic wall or even up under the posterior abdominal wall, produces more pain and meteorism than free intra-peritoneal blood in many cases.

The above symptoms vary enormously, both in time of onset and severity, especially if the rupture is gradual in onset. Whether the foetus is expelled into the abdominal cavity in part, or completely, also changes the physical findings. Marked unexplainable shock, occurring in the course of labour, should arouse suspicion of rupture and indicate exploration of the cavity after delivery. A good motto is "explore if in doubt." Abdominal pain and a tender uterus after delivery is also to be viewed with suspicion.

### Prognosis

The foetal death rate is practically 100% in intra-peritoneal rupture. The maternal rate is quoted as between 50 and 90 per cent. With the present day methods of combating shock and loss of blood, this should be materially reduced.

### Treatment

(a) **Before Delivery.** Adequate treatment of shock and replacement of lost blood with plasma and whole blood is urgent and essential. Immediate Laparotomy must be undertaken. Prolonged delay to combat shock and haemorrhage is not indicated, because the bleeding is continuous and the shock progressive in character. The condition of your patient will get progressively worse. The risk is great, but it must be taken. Surgical interference must be complete and rapid. Over thirty minutes of intra-abdominal interference is invariably fatal. Ether and oxygen is the anaesthetic of choice, augmented by local infiltration of the abdominal wall with novacaine. The foetus and placenta are rapidly extracted and immediate attention directed to the bleeding uterus. If suturing of the uterine rupture is at all feasible, this procedure is more rapid, produces less shock, and is the procedure of choice. When extensive damage has occurred to the musculature, as in retroplacental hemorrhage, suturing of the uterine wall will be difficult and haemostasis inadequate. In such cases, a Supra-Vaginal Hysterectomy would be more advisable, or even the only course possible. Remove all easily accessible blood and blood clots and close the abdomen. The introduction of intra-peritoneal normal saline solution is always beneficial. During the operation, plasma or whole blood is given intravenously and continued as indicated.



A tight abdominal binder is applied from above downward, and a warm bed should be available in the operation theatre.

(b) **After Delivery.** The uterus should be explored vaginally if the diagnosis is in doubt. Shock and loss of blood are combated as before, and preparation made to explore the abdomen. More time can usually be taken with advantage, to combat shock before Laparotomy, than in rupture before delivery. Uterine packing may be consid-

ered, but is always doubtful in its effect to control intra-uterine bleeding—is only a temporary expedient, and always introduces a possibility of infection which the patient cannot combat.

The post-operative care is mostly concerned with the treatment of shock and secondary anaemia and the judicious use of ergot and Pituitary preparation, to ensure a firm non-bleeding uterus. In future-labours, an elective Caesarian section is undoubtedly in order.

## \*Pyelonephritis in Pregnancy

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### History

The earliest authentic discussion of this topic was recorded by Smellie in his book on Midwifery which was published in 1752. Rayer described the disease in 1840. Reblaub, a French surgeon, published a comprehensive report of several cases in 1892. Since then a plethora of articles dealing with this condition appeared in the medical literature.

### Incidence

Exact figures are rather difficult to secure, as various authorities give different statistics.

Dugald Baird of Glasgow in an excellent monograph on this subject published in 1936 in the Journal of Obstetrics and Gynaecology of the British Empire, reported that pyelonephritis was a causative agent in 15.6% of all cases admitted for antenatal complications in the Royal Maternity and Women's Hospital at Glasgow. Stevens and Henderson from a study of 3,462 pregnant women found this condition present in 1% of the cases. Crabtree and Prather of Boston give similar figures from a study of over 10,000 cases. Massey of the Mayo Clinic stated in 1943 that among the pregnant women who come to the clinic 2% have pyelonephritis. This rather high incidence may be attributed to the fact that in Rochester they deal with relatively fewer normal obstetrical cases. My own impression, from the cases in the St. Boniface and the Grace Hospitals, would suggest an incidence of 1%; i.e., cases of definite pyelonephritis.

This condition is said to be more common in primiparas. My own experience, though it is rather limited, seems to show that multiparas are at least as prone to develop this complication as are primiparas. It usually occurs in the second half of pregnancy. Even the acute form may also occur, or be continued, during the puerperium. This was true in one of the cases that I will describe presently.

### The Etiology

Anything which leads to the retention of urine within the renal pelvis and ureter makes them susceptible to infection. As dilatation and distention of the pelvis and ureter occurs in nearly all if

not actually in all pregnant women, it is rather surprising that the incidence is not any greater than 1%.

The infection is not spread by contiguity from below. In the great majority of cases it is haematogenous. Where the causative organism is a staphylococcus or a streptococcus it has its origin in such foci as septic teeth and diseased tonsils. However by far the most common organism is the colon bacillus. It has been demonstrated that this organism is absorbed by the bowel and is carried to the kidneys by the blood stream. We have found bacillus coli in our cases by culture from the urine.

The lymphatics may be the route of infection from the lower urinary tract or directly to the right kidney from the ascending colon.

### Signs and Symptoms

Clinically two types are generally recognized. First, the acute type, and second, the chronic.

#### A. The Acute Form

(1) The most uniform sign is the elevation of temperature up to 104 or more, swinging in type.

(2) Chills—are frequent but not always present. My own experience shows that at least one chill can be expected.

(3) Pain over the kidney region was complained of in my cases.

(4) Severe tenderness in the costo vertebral angle on the affected side or sides can be elicited.

(5) Leucocytosis—usually, though not always quite high, is present and affects the polymorphs principally.

(6) Pyuria—is a predominating feature.

(7) Sweats—the patients that I have seen, almost all had severe sweating.

(8) Abdominal distention—this does not seem to be given much prominence in the literature, but in at least some of our cases it was quite a troublesome feature.

(9) Frequency and urgency of micturition occurs often.

#### B. The Chronic Form

Here naturally the symptoms are not so characteristic. The onset is insidious. There is general



malaise, some anaemia. This is also often true of the acute form. The costo-vertebral tenderness can, as a rule, be readily elicited.

### The Differential Diagnosis

Many conditions have to be kept in mind, such as cholecystitis, toxæmia — of pre-eclamptic type, etc.

The chief problem is occasionally whether one is not dealing with a case of acute appendicitis, during pregnancy. In pyelonephritis fever is higher, leucocytosis, usually, though not always, is more marked. Chills and sweats are more common in pyelonephritis.

Costo-vertebral tenderness is one of the more or less pathognomonic signs for pyelonephritis. Of course if at all in doubt, ureteral drainage should solve the problem.

### Treatment

The important factor here as for practically all complications is prophylaxis.

(1) The elimination of foci infection, particularly infected teeth and diseased tonsils, must be attended to as they may be responsible for the pyelonephritis. From my own experience, I can say that I never hesitate to urge proper dental care at any stage of pregnancy. Extraction of teeth does not cause termination of pregnancy.

For the tonsils I am quoting from literature, but I think that even a tonsillectomy properly carried out will not lead to abortion or premature labor.

(2) Correction of constipation.

By the proper treatment of constipation during pregnancy we are definitely helping to reduce the incidence of pyelonephritis.

(3) Frequent urinalyses will help to detect pyuria early.

Some of the essential points in the active treatment are as follows:

(1) If a hospital is available it is best that the patient be taken there—at least for the acute case.

(2) Patient is put to bed, and kept warm.

(3) Fowler's position with knees flexed for comfort.

(4) Knee chest posture for short periods daily is advocated by some. I personally would hesitate to resort to this procedure particularly in the acute cases.

(5) Codeine or morphine for the relief of pain.

(6) Pitressin and if necessary duodenal drainage for the abdominal distention.

(7) Giving large quantities of fluids — 3,000 to 5,000 c.c. in 24 hours is quite important. If nausea or vomiting is present, the fluids will have to be given by proctoclysis or better still by the intravenous route.

The Sulfonamides have an essential place and in some cases will work miracles. They are usually effective whether the infection is a coccal or a bacillary type. Of course the usual precautions are

to be observed when they are used. Personally I depend a great deal on the leucocyte count, and insist on a daily report. On the first sign of the leucocytes showing a definite drop—the drug must be discontinued. Sulfamerazine is now strongly advocated for kidney infections.

Penicillin is of value only in the purely coccal type of infection. I understand it is valueless not only in the pure bacillary type of infection but even in the mixed type of infection, i.e., where both the bacilli coli and the cocci are a factor. The penicillin would be rendered useless by the bacilli coli. As you know penicillin is administered either intravenously or intramuscularly. In suitable cases for penicillin, we may soon be able to administer it with confidence by mouth.

"Penicillin given by mouth in combination with a suitable buffer salt such as trisodium citrate. The effective doses were comparable to the doses routinely used in parenteral administration." It is interesting to note the observation recently made—that penicillin is transmitted to the foetus through the placental barrier.

Where the sulfonamides or penicillin will not produce the desired effect; then the mandelic acid should be given a try; Burrows and Wellcome put up a powder—Ammonium Mandalate which could be used.

(8) The next procedure would be ureteral drainage. Here is where the help of a competent urologist is paramount. Ureteral catheters may be left in situ for as long as 48 hours at a time.

(9) **Termination of Pregnancy.** This has to be resorted to in some cases. Where all other measures fail to give definite results, induction of labor should not be delayed too long. Many authorities agree with this, e.g., Livermore of Memphis states that "failure to control infection necessitates termination of pregnancy." The quinine and small doses of pituitary extract should be tried for this purpose. If that fails surgical induction would be the next step.

(10) Once the diuresis is well established, patient should have a liberal diet to avoid emaciation.

(11) Exhibition of iron in all cases, and blood transfusions for anaemia when indicated.

### Prognosis

#### A. For the Mother

Fatalities though they do occur are fortunately quite rare. According to Dugald Baird, the mortality is about 3%.

Recurrence may be expected in 25% of subsequent pregnancies.

#### B. For the Foetus

The prognosis is poor. Abortions and premature labor if not actually induced, may occur spontaneously. Also, although the infection does not actually invade the uterine cavity, the nutrition of the foetus is interfered with. Stillbirths and death of the



foetus shortly after birth occur in about 15% of the cases; this, in addition to early abortion.

### Case Reports

I shall now present histories of two cases with slides. One before sulfonamides were available—the other after.

1. Mrs. E. R., age 30, admitted to the St. Boniface Hospital December 27, 1929. Para I. Gravida II. Last menst. period July 15, 1929.

Present Illness: There was an acute onset with severe backache, chills, fever, frequency and dysuria. Urinalysis showed much pus, albumin, and a trace of blood. Blood count was R.B.C., 4,150,000; W.C.B., 19,400. Blood culture was negative.

She was placed on a fluid diet and given Sod. Citratiss gr. xx., tid. for three days; this was then changed to Urotropin gr. x., bid. Foments were used externally. She improved, and against our advice, went home on January 11, 1930. She came back again on January 15, 1930, with a return of practically all the signs and symptoms as at the first admission. Expectant treatment was carried out but she failed to show improvement. By February 10, 1930, Rd. Bl. corpuscles were down to 2,320,000, achromia being present. On February 7, 1930, the urologist did bilateral ureteral drainage. There was no improvement. On the suggestion of the urologist, pyridium was given. There was still no improvement. February 11, 1930, she was given a transfusion of 400 c.c. of whole blood by the direct method. As her condition did not show improvement, labour was induced on February 16, 1930, by introduction of "rectal" tube into uterine cavity. A stillborn foetus was expelled on February 19, 1930; she then commenced to show improvement and was discharged as recovered on March 22, 1930.

This patient had two full term deliveries since then; without any severe exacerbations. However since then she has been more or less a constant invalid, but refuses to submit to a proper urological examination.

### Second Case—Mrs. L. K., age 26.

Admitted to St. Boniface Hospital August 30, 1939, at 9:30 a.m. apparently in labor. T. 101.4, pulse s38, severe headache and pain over left renal region. Blood culture—negative. Leucocyte count 27,100; urine showed pus; urine culture—*bacillus coli*, uterine contractions subsided; was given theelin 10,000 units, and infundin 2 min. doses every ½ hour for six doses. Contraction re-appeared. Normal delivery carried out—female child 7 lbs., 2 oz., 11:50 p.m. the next night. Pyrexia persisted. X-ray after diodrast showed considerable involvement of left ureter, pelvis-kidney being fairly normal. Distention of abdomen and sweating a marked feature. Sulfanilamide commenced September 1. Temperature soon dropped to normal.

There was a recurrence of fever on September

11 which disappeared promptly after sulfa drug re-established.

Patient was pregnant again a few months later and was delivered on October 15, 1940, without any complications; puerperium this time was quite uneventful.

### Summary.

(1) Pyelonephritis is not a rare complication of pregnancy.

(2) General prophylactic measures during pregnancy will help to prevent pyelonephritis.

(3) Multiparas are just as prone to develop this complication as are primiparas.

(4) The sulfonamides are the drugs of choice.

(5) Penicillin may be expected to be of use in only a limited number of these cases.

(6) In a number of cases, termination of pregnancy must be resorted to.

(7) The prognosis for the foetus is bad.

(8) The prognosis for the mother as to life is not dangerous but chronic invalidism may follow.

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## Calcium Deposits in the Abdomen---Part 1

The Third of a Series of Articles on Radiology—H. M. Edmison, M.D.

Probably the most common abnormality seen in routine films of the abdomen is the deposition of calcium in various tissues. This may be of no clinical importance, but on occasion will prove a valuable clue to the correct diagnosis.

In the interpretation of shadows thought to be caused by calcareous deposits, care must be taken to exclude all artefacts. These can result from the presence of foreign material either on the skin, in the soft tissues or within the intestinal tract. Such things as opaque pills or residual barium in the stomach or bowel may be confusing. Opaque medication injected into the gluteal muscles will cause dense shadows, although as a rule well outside the margins of the abdomen. Such shadows can also be due to faulty technique or damaged screens and these must be excluded.

### Vessels

Calcification of vessels within the abdomen will account for a large proportion of shadows seen. Phleboliths, which are small calcified thrombi in the veins, are found most frequently on either side of the pelvis. They are quite dense, rounded or oval, with smooth margins, and may be single or multiple. They can be confused with ureteral calculi and it is sometimes necessary to visualize the ureter to exclude this possibility.

Deposits of calcium associated with arteriosclerosis are also very common, and are usually seen in the pelvic arteries and those of the coeliac axis. Parallel streaks or the full circumference of the vessel may be outlined and if viewed on end, a ring-like shadow can be seen. When present in the upper left abdomen these shadows can simulate renal calculi.

Calcified plaques in the wall of the abdominal aorta resulting from atheroma are sometimes seen along the margins of the spine, but are much more clearly demonstrated in a lateral view.

### Lymph Glands

Calcified lymph glands are encountered very frequently. They may be found in any part of the abdomen, but are usually in the lower right quadrant, across the mid-abdomen, or less commonly in the left flank. They appear as single or multiple irregular discrete deposits. They are often mobile and when viewed laterally are usually well anterior to the spine. Infrequently a calcified node can be seen in the region of the notch of the liver.

### Costal Cartilages

Calcium is often deposited in the costal cartilages. It follows the course of the cartilages in a linear manner, obliquely upwards and medially across both upper quadrants. If only traces of

calcium are present, casual observation might lead to a diagnosis of gall stones, but the changes tend to be more or less symmetrical and if extensive the appearance is quite typical.

### Healing

Calcium is very often deposited in fibrous tissue in the process of healing as a result of either inflammation or trauma. One of the most important of this group is tuberculosis of the kidney. Discrete areas of calcification are seen in the substance of the kidney, usually adjacent to one or more of the calyces, but this must be confirmed by additional evidence before a positive diagnosis of tuberculosis can be made.

The contents of tuberculous paravertebral or psoas abscesses may contain calcium having an irregular mottled distribution, but the position and general appearance of these should be characteristic. The small scattered calcified nodules frequently seen in the spleen are either phleboliths or healed tuberculomas.

Rarely, single or multiple calcified abscesses of the liver may be seen as ragged, irregular densities, usually high in the right upper quadrant. Calcification following a subphrenic abscess can be demonstrated as horizontal streaks of increased density between the diaphragm and the liver. Plaques of calcification in the pleura of the lower thorax usually reach above the diaphragm, but Ghon tubercles are sometimes found in the posterior pulmonary sulcus.

Calcification of the adrenals, although not common, should be recognized when present. The deposits are usually distributed throughout the gland in a finely irregular, punctate manner but rarely the gland is more densely calcified. They are to be found on either side, about the level of the first lumbar vertebra in relation to the upper pole of the kidney.

### The Spine

Changes in the spine and associated tissues can produce shadows which may cause difficulty in interpretation. Calcification of one or more intervertebral discs is not uncommon but is so well localized to this structure in both the antero-posterior and lateral views there is seldom difficulty in recognition.

Osteoarthritis, with hypertrophic changes about the margins of the vertebral bodies should also be included. When the lipping is extensive and several vertebrae are involved, there should be no confusion but if localized, interpretation may be more difficult especially if spurs appear to be detached. It might be necessary to take lateral views before the exact nature of the lesion can be demonstrated.



## \*Allergy Diagnosis

The most important step in diagnosis is the taking of a comprehensive history. First, one must establish unequivocally, the allergic nature of the complaint. "All that wheezes is not asthma." By its nature, allergy is characterized by periodicity. Periods of complete remission of symptoms suggest an allergic cause. A suspected case which has progressive and continuous symptoms and signs may not be allergic. The family history is often suggestive because of the marked hereditary tendency shown by allergy. Manifestations which occur only after middle life are likely to be non-allergic. The circumstances under which the patient has symptoms or relief may give a clue to the offending agents.

Many symptom complexes have been attributed to allergy. Vasomotor Rhinitis is generally presumed to be allergic in nature, and yet it may occur as a result of infection or of constitutional disorders, especially endocrine.

Bronchial asthma is usually an allergic phenomenon, and yet it may be mimicked by emphysema, carcinoma, cardiac decompensation, uraemia, foreign body and bronchitis. Chronic recurrent headache is not necessarily migraine, nor is all migraine allergic.

A patient presenting symptoms suggesting allergy must not only have a thorough history taken, but he must be carefully examined. Similarly and conversely, allergy must be considered as a factor in cases of chronic nasal symptoms, recurrent pneumonia or bronchitis. A careful examination may reveal conditions apart from the current allergic problem.

Special examinations and laboratory procedures are usually required. The X-ray is invaluable in the study of the respiratory tract, but X-ray interpretation requires experience in interpreting findings due to allergy and those due to other disease. The blood should always be examined and the presence of an eosinophilia is often very suggestive. Routine urinalyses are an obvious necessity. The patient must be studied as a whole and all pertinent examinations carried out.

Having made a thorough study of the patient's history and physical and laboratory findings, special allergic tests should be carried out. There are many varieties of allergic tests, but the testing of skin reactivity by one method or another is the most important. Skin tests are based on the fact that an allergen will produce an urticarial wheel when it is brought into contact with specific reagins in the dermal cells.

The two most widely used methods of skin testing are the scratch test and the intradermal

test. The former is the simplest to carry out and it is safer and less likely to give false positives. It is done by making a short and superficial scratch in the epidermis and applying the test substance. Immediate reactions occur in thirty minutes or less and consist of a varying red flare and an urticarial wheel in the centre. Such reactions may occur in very sensitive skins non-specifically and controls must always be used. If several tests are done simultaneously, the negative reactions serve as controls. Occasionally delayed reactions occur in six to twenty-four hours. These are not urticarial but appear as raised red papules and are probably analogous to the arthus phenomenon. Their significance is not always clear, but they may indicate sensitivity, especially with foods and moulds. These delayed reactions may only represent reactions to non-specific irritants in the extract and in intradermal testing; they should probably be ignored. Violent skin reactions can and do occur even with the scratch technique, especially if large numbers of tests are done at one session on a very sensitive individual. Occasional fatal reactions have been reported.

Good scratch testing requires potent non-irritant extracts. A large number of tests should never be done at one time, probably never more than twenty. If the first tests show rapidly appearing large reactions, further tests should be postponed. Tests should be done on the arm, so that a light tourniquet can be applied, if necessary, to avoid further absorption from a violent reaction. If preliminary testing shows that the patient is not hypersensitive, the skin of the back may be used for subsequent tests, as it is often more convenient and sensitive. Scratches should never go deeper than the dermis and should be an inch or further apart. They should not be longer than one-eighth of an inch.

The choice of suitable test material is a difficult problem. Many commercially available extracts are useful, but their potency varies and only experience can establish their particular value. Obviously it is useless to test with a substance with which the patient is unlikely to come into contact. The most important test materials are those which may be classified as inhalants. Of these, pollen, fungi and the common domestic dusts, such as animal epidermals, cosmetics, textiles, household dusts, etcetera, are those most commonly useful. Obviously, the examiner must know which of these are important in a particular case. Testing with a pollen which may be important in Texas but which does not occur in Manitoba is obviously a waste of time. In any area there are many wind-borne pollens, but only a few of these occur in sufficient amount to be clinically important.

\* Third in a series of short articles on Allergy. From the Department of Medicine, University of Manitoba, May, 1945.



Negative skin tests do not mean that the patient is not allergic—they simply mean that his allergy has not been demonstrated. Positive tests must be interpreted in the light of the patient's history and a knowledge of his environment. Used in this

way, they are of very great assistance in making a diagnosis and in deciding on a suitable course of treatment. In a succeeding article, further methods of allergic diagnosis will be discussed.

## Clinical Luncheon Reports

### St. Boniface Hospital

#### Heart Block Following Diphtheria

Dr. G. Shapera

Diphtheria is no longer a common disease, and for that reason may develop unsuspected. The faucial type is the most usual form, and of this there are three degrees—mild or localised, moderate or progressing, and severe or malignant. In the mild form both local and systemic evidences are slight, and 10 to 20 thousand units of antitoxin will cure. In the progressive form the membrane is more extensive, there is adenitis and the child is definitely ill. The heart is threatened. The severe or malignant variety is the most serious. The membrane is widespread, the neck is thick, the face pale and swollen, the expression apathetic. The urine becomes scanty and albuminous and there are, within a few days, evidences of cardiac involvement (tachycardia, brady cardiac, irregularities). The supervention of vomiting and rapid enlargement of the liver, along with pronounced changes in heart rhythm, means almost certain death. The heart and the nervous system are the structures most vulnerable to the toxin of diphtheria, and of these involvement of the heart is the more dangerous.

The myocardium may be severely damaged and when the conducting mechanism is involved partial or complete heart block will result. These are grave complications, for the mortality in the first is 13%, and in the second 93%. Partial block can be recognised only by the electro-cardiograph. The P. R. interval is prolonged beyond 0.11-0.14 sec., which is the normal for children up to 12. There are other evidences of heart damage revealed only in the electro-cardiogram, and these precede the clinical signs—gallop rhythm, diminished first sound and change in pulse rate. The latter is a less accurate finding than lowering of the blood pressure.

The development of complete block may be recognised clinically by sudden slowing of the pulse, cyanosis, cold extremities, enlarging heart and liver, and very low blood pressure. This complication may appear within the first week.

Heart complications are so serious that in severe diphtheria, cardiograms should be taken in order to recognise as early as possible the supervention of cardiac damage. Careful treatment may help the child to carry on until the disease is controlled. When the child survives the heart re-

covers completely. Diphtheria does not cause chronic heart disease.

Dr. Shapera gave the histories and showed the cardiograms of three fatal cases. It is worthy of mention that none of the three had been protected against the disease.

### St. Joseph's Hospital

#### Purpura and Gastric Ulcer

Dr. R. Danzinger

Dr. Danzinger presented a man of 42 who had not been well since January, when he had had a severe cold. He had been working since then, but only for four or five days a week. On April 9th, while moving furniture, he felt severe pain in one leg and then, some hours later, in the other. His arms also were very painful. He got home with difficulty and was seen by Dr. Danzinger, who found only tender, painful legs and arms. Next day both legs and thighs were discolored by many purpuric areas.

Apart from a history of poor appetite, gaseous dyspepsia and, lately, much vomiting, he told nothing of significance. Two years ago he had gone through an Out-Patient Department but left without diagnosis. Since April 9th vomiting had become much more severe and was bloody. There were crampy abdominal pains and black stools. The arms were somewhat tender but not purpuric. The legs showed many purplish spots.

The history and examination gave no clue to the cause of the purpura. Infections, bacterial or chemical toxins, and other usual causes were absent. The blood count showed 5,000,000 reds, 11,000 whites of normal distribution and 300,000 platelets. Morphologically the cells were all normal. Bleeding time and clotting time were within normal limits. No blood dyscrasia were present. Cachexia was absent. He gave no history of any allergic phenomena. The only additional finding was X-ray evidence of a gastric ulcer. The cause of the purpura remained obscure until the patient volunteered the information that he had eaten no fruits and few vegetables for many months. Up to this time the association of internal and subcutaneous bleeding with abdominal pain was regarded as Henoch's Anaphylactoid Purpura. This, as in the case of all eponymous diseases, supplied a name rather than a diagnosis. It threw no light on the cause and satisfied only the Record Office. Intravenous injections of ascorbic acid had been suggested when he was seen on the 11th, but



this was advised empirically on the basis that all patients with capillary erythropermeability lack vitamin C and not because we realized at that time where the trouble lay. It had the advantage of remedying the condition, but the disadvantage of masking a deficiency which the dye test would have revealed.

Four factors enter into the production of purpura—the platelets, the capillaries, the marrow and the spleen. Based upon the number of platelets purpura has been classified as thrombocytopenic and non-thrombocytopenic, and the former into essential and secondary. The role played by the platelets is not clear. Fasting blood will not clot if deprived of its platelets, but blood taken after eating will clot, even when all the thrombocytes have been removed. Again Bedson's anti-platelet serum will destroy the platelets, but this destruction is not followed by bleeding. Absence of platelets, therefore, is not essential for the production of purpura. The capillary wall is more important because its permeability is invariably increased in all purpuric conditions. Some histamine-like substance, of the nature and production of which we are uncertain, may cause the wall to leak, or the intercellular substance may be weakened by the absence of an essential ingredient. Thus serum alone (as in urticaria) or blood, may escape, sometimes the one alone and sometimes both in different areas. If the leakage is great the platelets may be largely used in plugging these leaks, thus leaving few in circulation.

The bone-marrow, the site of platelet production, may be depressed by toxins which may or may not at the same time affect the capillary wall, or malignant tissue may crowd out the marrow. On the whole, the role played by the bone-marrow is a secondary one, even in aplastic anaemia. The spleen seems capable of depressing all the blood elements (hypersplenism), but its role in purpura is obscure. In "essential" thrombocytopenic purpura removal of the spleen is curative, but this is not true in any other purpuric disorder.

Vitamin C deficiency sufficiently great to cause scurvy is rare in city dwellers, but subclinical deficiency is probably correspondingly common. There is much difference of opinion as to the possibility of subclinical deficiency producing purpura. Some say it does not; others, with equal emphasis, say it does. Still others take a middle view and say it can. Wright contends that all demonstrable capillary erythropermeability is due to Vitamin C deficiency. It would appear that Vitamin C is responsible for the integrity of the substance which exists between the endothelial cells. When the vitamin is deficient the erythrocytes find their way between the cells and accumulate without the vessels. In view of the co-existing peptic ulcer it is well to recall that in more than two-thirds of patients with such ulcers the blood-

plasma level of ascorbic acid is low and bleeding is invariably associated with very low levels.

The ulcer crater was small and there was no evidence of malignancy. The patient was given Meulengracht diet and additional vitamins, to which he responded well. Future treatment must take into account the fact that in about 5% of cases gastric ulcers become malignant. Careful and repeated X-ray examinations will be necessary.

J. C. H.

## Victoria Hospital

### Post Partum Uterine Inversion

Dr. D. R. Williams

Dr. Williams told of a primipara of 22 who after normal gestation had an otherwise normal labour interfered with by retention of the placenta. The placenta was found in the cervix and removed manually and with ease. Bleeding was not excessive. The patient, however, did not look well. She passed into shock, the shock deepened, and some hours later she died. At autopsy the uterus was found inverted, the fundus reaching to the cervix, and at the top of the organ a deep crater, on the edge of which were the ovaries.

(It is possible that this was an example of antepartum necrosis of the anterior lobe of the pituitary. This condition occurs usually in primipara who are a little over their expected date. The antepartum course is uneventful, but the labour tends to be prolonged. In every case the patient passes into profound shock not to be explained by the amount of bleeding. At autopsy the uterus is large and relaxed. The pituitary, when examined, was found to be two or three times normal size, and yellowish-brown in colour.)

### Adhesions of the Stomach Simulating

#### Peptic Ulcer

Dr. W. J. McIvor

Dr. McIvor showed a woman of 40 whose history, physical and laboratory findings suggested peptic ulcer. This diagnosis was confirmed by X-ray. Prolonged medical treatment brought little relief, and finally surgical intervention was decided upon, chiefly because of the pain and vomiting. At operation no sign of ulcer could be found, but around the pylorus there was a mass of adhesions. These were broken down, and since then there has been no indigestion.

### Ruptured Kidney

Dr. W. J. McIvor

A boy of 8 fell from a height of about 5 feet and complained of pain in the left ilio-lumbar region. He showed no signs of bruising and had no shock. He was put to bed with ice pack over the painful part. There were vomiting, abdominal distention and rigidity, all of which increased dur-



ing the following hours. The vomiting persisted for a day and a half. Pain and distension increased and the urine was bloody. On the fifth day after the accident, operation was performed. A large haematoma was found, and in the kidney a small laceration about an inch in length. This was repaired and recovery was quick and uneventful.

In discussion Dr. Hogg cited a case of a boy who developed a very large retroperitoneal haematoma. This was drained, as the lad was too ill to stand operation. Later he was operated upon and the kidney was found "exploded into shreds." The child recovered.

Dr. W. Tisdale had a boy of 12 wounded by a rifle bullet. The clinical findings were those of rupture of the kidney. Recovery followed expectant treatment.

### **Recurrent Empyema**

**Dr. W. F. Tisdale**

In 1943 a girl of 20 developed scarlet fever with lobar pneumonia as a complication. After the pneumonia had subsided fever recurred and empyema was suspected and proved to be present by aspiration. During a number of weeks aspiration was repeatedly performed and ultimately a rib was resected. This was followed by complete recovery. In January, 1945, two years later, this girl was admitted to hospital with chest-pain, and fever of three weeks' duration. Her temperature on admission was 103° and X-ray examination revealed empyema. She was given penicillin for 24 hours and then the chest was aspirated at a point through the scar of the previous rib resection. A tube was then inserted through the old site of operation, and in a few days discharge had ceased. Penicillin was given for five days. This apparently was an encysted empyema. Its relation to the original attack is not clear. There was some discussion about closed and open drainage and the advisability of repeating aspiration while the exudate was thin. There was mention, too, of injecting penicillin into the cavity or pleural space.

### **Carcinoma of Sigmoid**

**Dr. W. F. Tisdale**

Dr. Tisdale presented a female patient of 49 who for several months had been passing blood by rectum. The various disorders that might cause such bleeding were excluded and a barium enema was negative. Rectal examination, however, revealed a mass which proved to be malignant. At operation a mass, the size of an orange, was found at the recto-sigmoid junction. This was removed and the bowel repaired by anastomosis. Recovery was uneventful. X-ray therapy was not advised, as the malignancy was of a degree not

amenable to radiation. The important point about this case was the positive physical finding in the presence of a negative X-ray report.

As a commentary on this case I recall a radiologist telling me that he had been asked to give a barium enema. As he was about to do so he found that there was a rectal mass so large that he could not get the nozzle to pass it. The doctor was notified and the X-ray cancelled.)

## **Winnipeg General Hospital**

### **Prolonged Pyrexia of Unknown Origin in an Infant**

**Dr. Gordon Chown**

Case: Female child 3 months old who has run a temperature ranging from 103 to 105 since birth. The baby was 5 lbs. 12 oz. at birth, normal labour, with two lower central incisor teeth almost erupted. On the 11th day after birth without any demonstrable cause the patient's temperature rose to 103, dropped in ten hours, then quickly went up to 105. The patient was given sulfanilamide grains 1 o.h. 6 for four doses. This drug had no effect upon the temperature. Sulfanilamide was repeated a few days later, without result. Blood count was normal. Later on an X-ray plate was taken of the chest, with negative results. Repeated urinalyses and blood counts were normal. A month after birth Penicillin was given, without effect. A lumbar puncture was unsatisfactory, due to red blood cells from the spinal tap. The fundi were examined by Dr. Cruise and found negative. Quinine was used but discontinued on account of vomiting, which interfered with the baby's nutrition.

Dr. Chown then showed thirteen four-hour charts in line, attached to probably a 10-ft. wooden rod. These four-hour charts showed dramatically the wide range and continued pyrexia of this infant. Dr. Chown compared these charts to the hanging of the washing on the Siegfried Line.

Dr. Best delivered this case—spontaneous delivery after 32 hours. (The parents were never out of Canada.) On the lower gum there were bullae which when ruptured showed two tiny sharp teeth. Certain dentists say that such infants have three layers of teeth. These two lower central incisors were extracted on the seventh day, as these teeth irritated the mother's nipple. The teeth were easily extracted and the sockets healed quickly.

Dr. Harold Rice gave a resume of the heat regulating mechanism of the human body accounting for heat production and heat suppression, the centre of the heat regulation being in the hypothalamus. Conditions that may cause disturbance of heat regulation may be an aneurysm, nearby neoplasms, tumours of the frontal lobe and tumours of the third ventricle. Dr. Rice mentioned



psychogenic fever. He cited four cases that had been reported in the literature; all patients recovered.

### Three Cases of Right-sided Aorta

Dr. R. A. McPherson and Dr. I. M. Thompson,

Professor of Anatomy

Dr. MacPherson:

This condition was mentioned in 1934 by a German. In 1938 Garland of the U.S.A. gave 115 cases; 15 occurred during life. Dr. Maude Abbott, who is an authority on abnormalities of the heart, reported 13 right-sided aortas in a thousand autopsies on abnormal hearts. As a rule this condition has no definite symptoms; sometimes dysphagia and dyspnoea are accompanying symptoms. The electrocardiogram is normal. In the X-ray diagnosis there is no aortic knob and the pulmonary conus is prominent. In the differential diagnosis one must recognize this condition from pathological lesions such as aneurysm and tumour of the mediastinum.

Dr. MacPherson showed X-ray photographs of a male who came into the Outdoor in 1940, and his right-sided aorta was diagnosed mediasternal neurofibroma. Later on this condition was correctly diagnosed. Two other cases, male and female, both came to the office the same day with gastro-intestinal symptoms. Dr. MacPherson stressed the importance of not getting this condition

confused with an aneurysm or a mediastinal tumour.

Dr. Ian Thompson showed colored slides, giving the developmental embryology of this rare condition. After seeing Dr. Thompson's slides one could more easily comprehend how this condition comes about.

### Newer Hemostatic Substances and Other Observations

Dr. J. W. R. Rennie

Dr. Rennie gave a short travelogue after returning from New York. He mentioned newer agents for the stopping of haemorrhage—fibrin flakes, gelatine foam, and oxydized gauze. The oxydized gauze put into a wound does not give rise to increase in polymorph cells, and after seven days there is a zone of phagocytic cells around the area. This gauze is supplied in envelopes of various sizes and is used to control haemorrhage in areas such as brain, liver, spleen, thyroid, and prostatic bed. This substance cannot be autoclaved.

Dr. Rennie mentioned Dr. Whipple's work with Banti's syndrome hypertension, in anastomosing the left splenic and left renal vein. He cited six cases where the ascites disappeared and the patient had a feeling of well-being. The anastomosis of the renal and splenic vein is carried out by means of vitallium tubes. Dr. Rennie gave the technique for this anastomosis. These vitallium tubes are also valuable in anastomosing of vessels in traumatic surgery.

\* \* \*

### Recent Accessions to the Medical Library

National Committee on Maternal Health, Inc.: Proceedings of the conference on human fertility, sponsored by the National Committee on Maternal Health, January 15-16, 1943, New York City, edited by Earl T. Engle. Menasha, Wisc., G. Banta Publishing Co., 1943 (c1944).

Sheldon, W. H., Stevens, S. S. and Tucker, W. B.: The varieties of human physique; an introduction to constitutional psychology. New York, Harper, 1940, 347 p.

Smout, C. F. V.: The anatomy of the female pelvis, including a description of the placenta and its formation and the foetal circulation; with sections in part 1 on the histology of the female reproductive tract and a chapter on ovarian endocrine function, by F. Jacoby. Foreword by Sir Beckworth Whitehouse. London, E. Arnold, 1943, 190 p.

Snapper, I.: Medical clinics on bone diseases, a text and atlas. New York, Interscience Publishers, Inc., 1943, 225 p.

### Journals

American review of Soviet Medicine: v. 1, 1943.

Anaesthesiology: v. 1, 1940.

Bulletin of the history of medicine—supplements: Supplement 1, 1944.

Cancer research: v. 4, 1944.

Chinese medical journal: v. 62, 1944.

The Journal of neurosurgery: v. 1, 1944.

\* \* \*

### Free Library Postal Rate for the Medical Profession Within Manitoba

The Medical Library has a reduced postal rate for use on all loans of BOOKS and PERIODICALS mailed to the medical profession residing within the province of Manitoba. When the borrower receives the loans, all that has to be done, is to SAVE THE WRAPPER, with the LABELS supplied by the library, and follow the instructions thereon. NO POSTAGE need then be PAID.



## Something Old

From the Autobiography of Felix Platter

(1536-1614)

"Before the New Year, and even later in the Spring, I did not have much to do. Still I did the best I could whenever an opportunity offered, at meal times or on other occasions, to talk about diseases and how to treat them; so that often when at home conversing with my father-in-law, who sometimes took a meal with us, and was a very experienced surgeon—he was a butcher—I was picked up and taken in hand by him. I still needed more experience: "practice is different with us" (Platter had studied in France). As a young man I listened unwillingly to such comments and often disputed them, yet I could do nothing but submit, as I had still no practice. However, practice began to come to me and gradually to increase. As there were 17 doctors in the place I was forced to use artifice if I wished to support myself by my practice, and God also imparted to me his rich blessings. . . . I began to receive the patronage, first of citizens, then of the nobles who tested me specially by sending me urine from which I was expected to make a prognosis. In this business I so managed that several were filled with astonishment and began to employ me regularly. From day to day I gained more and more practice both among residents in the city and also among strangers. Foreigners also summoned me to their houses and castles to which I hastened and remained but a few moments, hurrying away at once again to my house so as to be able to attend to many at home as well as abroad." Among the practitioners "there was also an old woman who had a throng of patients as did the two executioners, the brothers Kase, Wolf and George, of whom the elder was famous in medicine at Schaffhausen as was his father, Wolf also, executioner at Tubigen."

### From the Aphorisms of Hippocrates

"When sleep puts an end to delirium, it is a good sign."

"Weariness without cause indicates disease."

"To eat heartily after a long illness without putting on flesh is bad portent."

"Food or drink slightly inferior in itself, but more pleasant, should be preferred to that better itself, but less pleasant."

"The old have fewer illnesses than the young, but if any become chronic with them they generally carry it with them to the grave."

"Those naturally very fat are more liable to sudden death than the thin."

## Something New

Spray Therapy For Sprains

Immediate relief of pain and restoration of function occurred in 60-90% of patients with sprains who were treated by ethyl-chloride spray. Few of the patients were disabled for more than three days. Best results occurred in sprains of ankle, knee and cervical spine. A fine or medium spray is directed upon the joint from a distance of about two feet. It is stopped as soon as the skin blanches. The frost is wiped off and the patient urged to move the joint first slowly and then more quickly through its whole range. Any fresh point of pain is then identified and re-sprayed. In ten or fifteen minutes function is restored in mild cases. Twice as long and several sprayings may be needed in more severe cases.—Bingham—Military Surgeon. 96:170, 1945.

Distention of the gallbladder will produce changes in the electrocardiogram but these are unpredictable. S. W. McArthur and Howard Wakefield of Chicago report that they distended the gallbladders of 25 patients prior to operation and had cardiograms taken during the manoeuvre. The rate in some patients increased, in others became slow. T<sub>2</sub> frequently became isoelectric and extra systoles were common.

The simultaneous administration of sodium chloride will prevent the development of alkalosis in patients on "Sippy" treatment for peptic ulcer. The amount of salt given is from 75 to 150 grains daily.

Vitamin C in the form of bismuth cevitamate changed the reaction in 7 out of 10 patients with Wassermann-fast lues. The vitamine detoxifies with arsenic and bismuth and increases their spirochetal powers.

The scalenus anticus syndrome may follow gynecological operations in which the patient is in the extreme Trendelenburg position. Hyperextension of the head and abduction of the arm cause stretching of the muscle and injury to the brachial plexus. The syndrome appears from a few days to eight weeks after the operation.

The itching of skin eruptions can be controlled by massive doses of thiamine.



# "NOCTINAL"

(SODIUM ETHYL SEC.  
BUTYL BARBITURATE  
"Frosst")



**A SAFE QUICK ACTING SEDATIVE, FREE FROM "HANG-OVER"**

For sedation, hypnosis and to augment the action of analgesics.

"Noctinal" is intermediate between the very short acting barbiturates, such as Pentobarbital, and the long acting, like Phenobarbital. It is effective in 30 minutes and lasts 4 to 6 hours. The patient awakes refreshed after a sound, restful sleep, with no "hang-over" of depression.

"Noctinal" is safe. Even in excess of full therapeutic doses, it has practically no toxic effect on heart, blood pressure, respiration or kidneys. It is easily soluble in water and is quickly eliminated.

## DOSAGE

### TABLETS:

When mild continuous sedation is required:  $\frac{1}{2}$  to 1 grain two to three times daily.

In insomnia:  $1\frac{1}{2}$  grains about one-half hour before retiring.

In excited states:  $1\frac{1}{2}$  to 3 grains two or three times daily.

Best results are obtained if followed by a warm drink.

### LIQUID:

Average dose for adults: Two to three fluid drachms (7 to 11 cc.) in a wine glass of water.

Maximum daily dose for adults: Two fluid ounces (57 cc.).

## MODES OF ISSUE

"Noctinal",  $\frac{1}{2}$  gr. C.T. No. 352 "Frosst"

"Noctinal",  $1\frac{1}{2}$  gr. C.T. No. 353 "Frosst"

Both tablets are grooved to facilitate halving the dose.

"Noctinal" Elixir No. 601 "Frosst"

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### Annual Meeting Report

The writing of this page is, at times, a bit difficult, especially when nothing extraordinary is afoot in Society circles or when the well of invention seems to have run dry. Then I have perforce to turn to the pages of history or couch a lance against our friends the irregulars. But this month it is different. The doings of the Annual Meeting, full as they were of interest, should be good for this page and the next. Unfortunately, I cannot give you an eye witness report, but I shall reflect as accurately as possible the doings at, and the spirit of, the meeting.

First of all, the attendance was excellent. Too often the members take for granted that things have gone well and don't bother to listen to details. But this year there were many things to bring out an audience—the election, the conferring of Testimonials and Certificates of Life Membership and, not least, the Address of the President.

First to report was Dr. Walter Tisdale, the Secretary. He commented on the year's work and outlined the various matters that had been considered by the Executive. Among these were the contributing of \$500.00 to the Manitoba Medical Service; the preparation of a new Constitution; the appointment of a committee to work with the proposed Medical Centre; the designing of an insigne for the Society; the granting of Testimonials to former presidents, and a number of other important matters, all respectfully submitted on the one hand and graciously approved on the other.

Next stood forth Dr. E. S. James, the keeper of the money-bags. He brought no specimens of our money with him because, according to his report, we haven't any. Worse than that, we are "in the hole" to the extent of some \$26.04. In fact, it is far worse than that, for at the bottom of his report there is a note reading thus: "In accordance with a resolution passed at the Council Meeting of April 18th, 1945, that \$500.00 be placed in a special account to be drawn on at the request of the Library Committee of the Faculty of Medicine, this was done, thus making an operating deficit of \$526.04." This, it has been pointed out to me, is an operating deficit which is not the real thing by a long shot, for the Trustees, snooping around on their annual investigation, found \$463.82 tucked away in the bank, so we're not broke after all. Dr. James reported also that eleven members didn't pay up.

The next report also dealt with money. It came from Dr. J. E. Tisdale, the retiring Trustee. He told us that in addition to the \$463.82 we had in the bank, we also had two \$1,000 Bonds. He had found all the cups complete with handles, and each had a saucer. No one had "snitched" any of our "silverware". The chair with the broken leg had entered another year with its fracture. Of the various machines of which we possess one-half, our fraction was in each case intact and operative. The Trustees were warmly thanked for the care they had taken of our assets.

Dr. Dyma, chairman of the Membership Committee, reported that thirty new members had been enrolled. This brought the number of active members to 235. There are also 21 associate members, 14 who enjoy the privileges of life membership and one honorary member (Mr. Gordon Gordon-Taylor, Senior Vice-President of the Royal College of Surgeons). Dr. Dyma recommended that members who had been in the Services should be excused their fees for the year of their discharge and the year after. Everybody was for that.

In the absence of its chairman the report of the Programme Committee was read by the secretary. It said that there had been seven regular and four special meetings, and thanked the nineteen members who had addressed the regular sessions.

The Legislative Committee, reported Dr. W. E. Campbell, had done nothing as such, but its members, as members of the Committee of Thirteen, had been busy on legal matters, particularly in relation to the Basic Sciences Bill. Now any bright lad who thinks he's got a corner on the "Healing Art" will find himself stumped unless he can show a familiarity with the works of Cunningham, Boyd, Cameron, Starling, et al., gentlemen of whose very existence he is probably blissfully ignorant,

Dr. J. E. Tisdale's Public Health Committee had nothing to report. There was a time when it was the busiest and most popular of all committees. That was in the days of the Soup Kitchen, when Dr. Tisdale used to help us to buy a bit of soup for ourselves by inviting us to report on how the other half ate (and paid us for doing it—at least the Government did).

Dr. Dan Nicholson's careworn brow showed a few more creases as he related the troubles of the Library. It is hard to get books. Journals are scarce. Binding prices have soared. He thanked the Society for its contribution, which had bought 25 volumes and bound three more. That was 10%



of the year's purchases. In all, the Library had 14,504 volumes and subscribed to 160 journals. Last year about 48% of the city doctors used the Library; the year before only 40%. The Library is eager to lend, and also want suggestions for new purchases.

Dr. A. Hollenberg gave a three-page report on a busy year's work of the Committee on Economics. He said that, on May 1st, there were 13,671 people covered by the Manitoba Medical Service. Of these 2,363 came under Plan A and 11,408 under Plan B. The most expensive item was laboratory service. The matter of special services is still unsettled. The end of May will see the end of the Firefighters Club Medical Scheme. The firemen are going to switch to the Manitoba Medical Service.

Reference was made to the Soldiers' Dependents Advisory Board. Nothing is likely to be done about this. The Workmen's Compensation Board is another matter. The Committee is anxious that there be a revised schedule of fees and that it be fuller and more detailed, so as to remove the more outstanding difficulties that now exist. The part played by the Committee in the proposed Provincial Health Plan was gone into in detail.

Dr. Hogg, as representative on the Central Council of Social Agencies, reported his activities. These consisted chiefly in taking part in the discussions about the care of unmarried mothers. It would seem that a fair number of future citizens are being got 'twixt unlawful sheets and start their inauspicious lives by being problem children with problem mothers and no apparent fathers.

This matter also occupied most of the report Dr. W. F. Abbott presented for the Section of Obstetrics and Gynecology. The section had no clinical meetings.

Dr. Beckman, Secretary of the Eye, Ear, Nose and Throat Section, reported the proceedings at meetings held in the various hospitals.

The Medical History Section reported two meetings and contributions by its members to the Course on Medical History given to students of the Second Year.

The state of the Overseas Fund was reported by Dr. Edmison. The receipts were \$54.50, from various doctors, and \$100.00 each from the C. P. & S. and M. M. A. Most of this was used up in Christmas and Easter parcels.

That, with perhaps some unintentional errors and omissions, is the essence of the business part of the meeting.

Then came the presentation of Testimonials to the past presidents. The office of president of this Society has been held by thirty-two men. Of these, ten have died. "These were honoured in their generation. They led us by their counsel and we were guided by their instruction. The

grave has taken their bodies, but their names shall not die." Let us remember them now.

Dr. J. R. Jones, 1913.

Dr. Harvey Smith, 1913-1914.

Dr. James McKenty, 1914-1915.

Dr. J. Halpenny, 1915-1916.

Dr. J. E. Lehmann, 1916-1917.

Dr. J. E. Coulter, 1917-1918.

Dr. R. J. Blanchard, 1918-1919.

Dr. Spurgeon Campbell, 1919-1920.

Dr. D. S. MacKay, 1920-1921.

Dr. W. H. Secord, 1921-1922.

Most of the surviving past presidents were on hand to receive the Testimonial, which will in the future be given to every holder of the office at the end of his term.

"The Winnipeg Medical Society, wishing to express its appreciation of the faithful and diligent service rendered to it by \_\_\_\_\_

during his term in the office of president, presents him with this testimonial as an evidence of the esteem of his colleagues and as a token of the thanks of the Society." Such is the wording of the document which, printed in black with initials in red, on a cream-colored paper and neatly framed, was presented by Dr. McNulty to his predecessors. The recipients, in the order of their terms of office, were the following: F. A. Young, E. S. Moorhead, F. D. McKenty, W. H. Wadge, J. D. McEachern, O. S. Waugh, A. T. Mathers, R. R. Swan, J. A. Gunn, J. D. Adamson, F. J. Hart, A. P. McKinnon, W. W. Musgrove, Gordon Chown, W. E. Campbell, O. J. Day, O. C. Trainor, F. G. McGuinness, Digby Wheeler, J. C. Hossack, C. B. Stewart, and C. M. Strong.

The presentation of the Testimonials was followed by the presentation of Certificates of Life Membership to eight most worthy members: Margaret Ellen Douglass, Mary E. Crawford, Neil John McLean, Ernest Samuel Moorhead, James Currie McMillan, Andrew Pritchard McKinnon, William E. R. Coad and John D. McEachern. Drs. Crawford, McKinnon and McEachern had their Certificates presented in absentia.

Under the heading "Miscellaneous Business" came the new Constitution. Its authors (Dr. McNulty and Dr. F. D. McKenty) were thanked for their labors and their labors were approved. Under this heading, also, came the "device" of the Society, which also was approved.

I am very pleased with the "crest" (more properly insigne) of the Society. The president commanded Tony Gowron and myself to go into a huddle and emerge with something distinctive and appropriate. A brief excursion into the realm of heraldry convinced us that we were not likely to satisfy in the remotest way Garter King of Arms, his heralds or pursuivants. Therefore we abandoned the idea of emblazoned escutcheons, and went in for simplicity. The result is, I think,

satisfactory. A ribbon, bearing the name of the Society, tied by a buckle bearing the date of foundation, enclosing the well-known and essential rod and serpent, as well as a single ear of wheat on each side, and on the free ends of the ribbon, a motto, "absit invidia" (let ill-will be absent)—such was our invention. Thank Tony Gowron for the nice art work. The president, being satisfied with our effort, gave us his benison and, at his own expense, had engravings made. The Executive, having no objections to insignia in general or to this insigne in particular, and having no objection, either, to the president spending his own money in any way he saw fit, gave their approval in turn, thus making everything regular and proper. I must say I like our little ophidian much better than his cousin who works for the Association. The latter is afflicted with a most embarrassing and uncomfortable kypho-lordosis. How he manages to cling to his support under these difficulties is a wonder-inspiring mystery.

After the ballots had been collected and while they were being counted came the Big Moment of the evening—the "piece de resistance," as our friends from across the river would say. This was the address of the president, which I hope you will have an opportunity to read in these pages shortly. It was received with loud applause. Then

the president, returning to his chair, announced the officers for next session: President, A. M. Goodwin; Vice-President, W. F. Tisdale; Secretary, R. A. MacPherson; Treasurer, Cherry Bleeks; Trustee, Donald Huggins. Well, here's wishing them all luck.

And now, until the Fall, when, D.V., the Notice Board will reappear with its highly popular comments on this and that—Cheerio!

J. C. H.

## Obituary

### Capt. David Stewart Noble

Capt. David Stewart Noble, R.C.A.M.C., was killed in action in Holland on April 22nd, while serving with the 11th Field Ambulance. Born in Winnipeg twenty-seven years ago, he attended Gordon Bell High School and graduated in Medicine from Manitoba University Faculty of Medicine in 1943. After serving at Camp Bordon and Niagara, he went overseas in January, 1944. He was the only child of Mr. and Mrs. David Noble of Winnipeg, and was well known in medical and musical circles.



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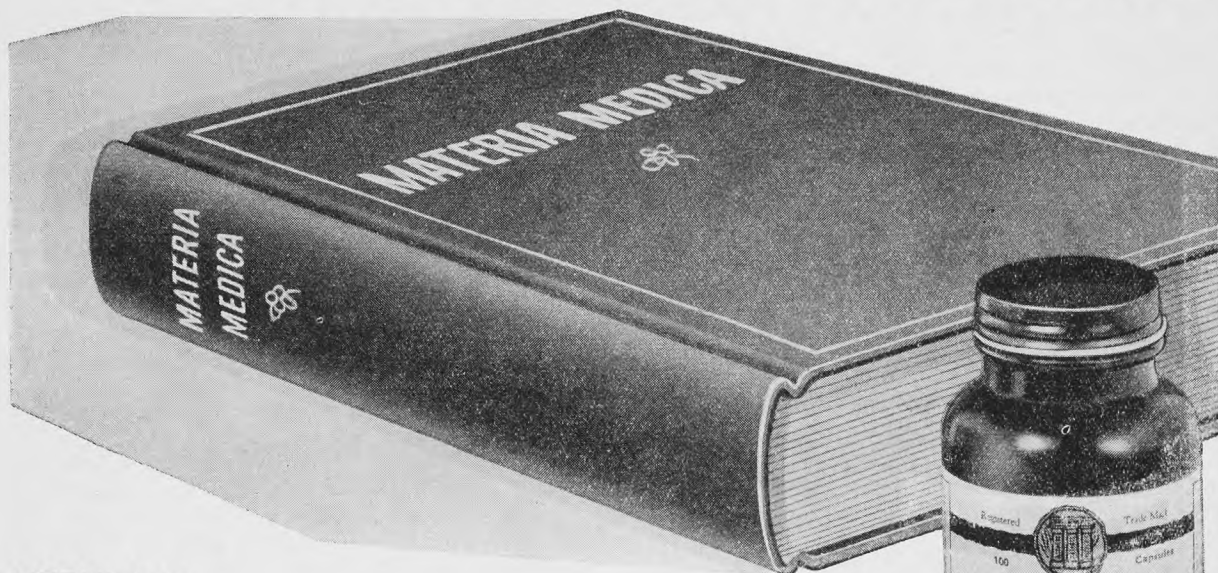
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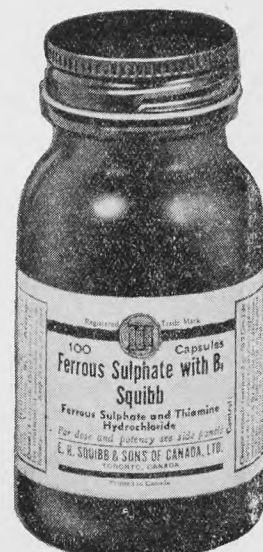


## FERROUS SULPHATE WITH B<sub>1</sub> SQUIBB

Capsules Ferrous Sulphate with B<sub>1</sub> Squibb are designed for oral administration in the prophylaxis and treatment of secondary anemia, especially where the addition of vitamin B<sub>1</sub> is considered desirable, as during pregnancy and lactation, infancy and childhood, and in patients with anorexia associated with lack of thiamine. Each capsule contains 3 grains (0.2 gram) of ferrous sulphate exsiccated (approximately 60 milligrams iron) and 1 milligram of pure crystalline thiamine hydrochloride (333 U.S.P. units of vitamin B<sub>1</sub>).

Tablets Ferrous Sulphate Exsiccated Squibb are intended for the prophylaxis and treatment of secondary anemias where supplementary iron alone is all that is required. The tablets are enteric-coated and contain 3 grains of ferrous sulphate or approximately 60 milligrams iron.

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## Editorial

J. C. Hossack, M.D., C.M. (Man.), Editor  
R. B. Mitchell, B.A., M.D., C.M. (Man.), F.R.C.P. (C), Associate Editor

### The Health Plan Moves Apace

The Minister of Health, the Hon. Ivan Schultz, is moving quickly in the establishment of the Health Plan. There is evidence of both his care and sincerity in the way he seeks direction from the profession. Most recent of these consultations was one held on May 20th, when the Premier and the Minister were luncheon hosts to the Executive Committees of the Association, the College of Physicians and Surgeons, and the Medical Centre. After the luncheon Mr. Schultz invited the free discussion of a number of points; and, in turn, clarified others. He announced, also, that in order to assure a supply of doctors to rural areas, the Government was prepared to subsidize students who would undertake to practice in the country, and was prepared also to finance young men who wanted to train themselves in the specialties. These academic advantages, together with the promise of adequate hospital and laboratory facilities, will make country practice very attractive in the near future. Mr. Schultz made it clear that, while the administration of the Plan will be the responsibility of the Government, its direction will be the responsibility, solely, of the Commission. This directing Commission will be made up of eleven members, six of whom will be laymen, but as the chairman will be one of the lay members, the doctors will have equal voting strength.

### A Committee on Contracts

At a recent meeting of the Executive of our Association a most important step was taken. It was the implementation of a suggestion repeatedly put forward on this page, namely, that all physicians under contract should have their contracts approved by the Association before they are signed.

Dr. F. D. McKenty was appointed chairman of a committee whose duty will be to consider the terms of all contracts of all doctors on salary. Dr. McKenty will select his fellow-committeemen and will have legal assistance when it is needed. In this way doctors will be spared the annoyance of bargaining with laymen and will be protected against impositions and injustices. In order, however, to make this measure effective, it is absolutely essential that all doctors refrain from making private arrangements on their own account. The suggestions of the committee will be published as soon as they are formulated.

### Scientific Exhibits

The Committee on Scientific Exhibits has been formed and wants action from the Association

members. If you have an exhibit in mind, send word of it now to the Secretary: Dr. D. L. Scott, Manitoba Medical Association, 510 Medical Arts Building, Winnipeg.

### Nominations for Executive Offices

At a meeting of the Nominating Committee of the Manitoba Medical Association, held in Winnipeg on April 15, 1945, the following nominations were made for the executive offices:

President.....	P. H. McNulty, Winnipeg
First Vice-President.....	J. R. Martin, Neepawa
Second Vice-President.....	C. H. A. Walton, Winnipeg
Secretary.....	D. L. Scott, Winnipeg
Treasurer.....	A. M. Goodwin, Winnipeg
Rural Member at Large.....	E. K. Cunningham, Carman
City Member at Large.....	Elinor F. E. Black, Winnipeg

### Workmen's Compensation Board, re Payment of Physicians' Accounts

April 27th, 1945.

Dr. F. D. McKenty,  
514 Medical Arts Building,  
Winnipeg, Man.

Dear Dr. McKenty:

### Re: Manitoba Medical Association

I received instructions from the Manitoba Medical Association, through you, to endeavor to get an amendment to the Workmen's Compensation Act, by which the limitation of six months on filing of physicians' accounts would be extended, or, if possible, wiped out. On the 8th of December last I forwarded you a copy of a letter which I wrote to the Chairman of the Board, asking for the addition of the proviso set out in my letter.

The effect of this proviso was, that the Board might, in its discretion, for good cause shown, recognize and pay any account for medical services rendered after the period of six months fixed by sub-section 11 of section 22 of the Act.

In discussing the matter with the Chairman, however, and the Government, they thought it was better not to leave the matter to the discretion of the Board, but to extend the period of time to one year. Accordingly, by the Act passed at the last Session of the Legislature, the section was amended so that it now reads:

"No account for medical services shall be recognized by the board unless the account is filed with the board within twelve months from the discharge of the workman by the physician who gave the medical care in the case, or within twelve



months of the date upon which the workman returned to work following the accident, whichever period is the shorter."

It is anticipated that this will solve the doctors' problem, but in the event that it does not do so, for good reason, the Chairman will consider further representations.

The new Workmen's Compensation Act is not yet printed, but I understand it will be available shortly and will be obtainable from the King's Printer.

I am now enclosing you a memorandum of my account in this connection.

Yours faithfully,

E. K. Williams, K.C.

### Manitoba's Memorial

To the Editor of the Manitoba Medical Review.  
Sir:

Now that the war in Europe has ended in victory and that success against the Japanese seems assured, the minds of men turn to the thought of a war memorial. In times past we have been content with tablets, statues and cenotaphs, but now these do not meet our needs. We wish for some living memorial which, while recalling the dead, provides a more excellent way for the generations yet to be. What could be more fitting than a Medical Centre!

As medical men we recall particularly the losses in the ranks of our own profession. At least six graduates of Manitoba Medical College have given their lives for their country: Captains Wendell Kippen, Harry Marantz, H. F. Dickson, J. A. McFadden, Stewart Noble and Lt.-Col. A. W. S. Hay. They have been cut off in their physical prime; some like Art Hay with much achievement to their credit, and all with promise of greater things to be done. How these men would have rejoiced to see the Manitoba Medical Centre come into being! Three of these men have suffered from having to take the abbreviated medical course and have three months lopped off their interne year. On that account alone Manitoba was in their debt, and if they had come back, should have repaid the debt through refresher courses or an interne year. They have not returned and the debt has not been paid. What better retribution than to make the noble dream of the Manitoba Medical Centre come true! Living — how they would have delighted in the opportunities of better teaching and increased facilities for research. Dead — how can their memory be kept greener in our minds than by making the plan a reality!

But Manitoba Medical Centre may fittingly become even more than a memorial for the young medical men. It is not to be a Winnipeg centre,

but a medical centre for all Manitoba, a shrine of healing for the province and the regions contiguous. It is not a counter proposal to the health scheme of the Minister of Health and Public Welfare, but rather its complement. The sacrifices and devotion of Manitoba's sons and daughters in the armed services has been matched by the sacrifice and devotion of the civilians who have participated in the Red Cross blood donor clinic, the women who have donated blood to the hospital blood banks and of those who shared in the multitudinous activities of war effort. Their enthusiasm should be perpetuated in Manitoba Medical Centre.

It is true that Manitoba Medical Centre is to be located in one spot, and that is for the sake of convenience. The centre will not destroy either the autonomy or usefulness of existing hospitals. Medical teaching will continue to be carried on in hospitals outside the Centre. The grouping together, however, of three or more hospitals and institutions in one closely knit space and the creation of a new clinical teaching unit will ensure better training of medical students, nurses and technicians, and greater facilities for the diagnosis and treatment of diseased persons and opportunities for research. Manitoba Medical Centre may become a place for the healing of the nations and a temple of science, a spot where young and old, rich or poor, may come to be made whole. What nobler memorial can be imagined!

Let the whole medical profession unite to make Manitoba Medical Centre a fitting memorial for the heroes of 1939-1945.

Ross Mitchell.

### Refresher Course in Laryngology, Rhinology and Otology

The University of Illinois College of Medicine announces its sixth semi-annual Refresher Course in Laryngology, Rhinology and Otology, September 24th through September 29th, 1945, at the College, in Chicago. The course is intensive and largely didactic, but some clinical instruction is also provided.

It is especially suited to specialists unable to devote a longer period for advanced instruction and to others seeking a comprehensive review of the field of otorhino-laryngology. The number of registrants will be limited. It is therefore desirable to apply for registration immediately. The fee is \$50. When applying, give full details as to school and year of graduation, postgraduate training, college degrees, etc. Write to Dr. A. R. Hollender, Chairman, Refresher Course Committee, Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12, Illinois.



# Penicillin DOSAGE TABLE\*

INDICATIONS	INITIAL DOSE (UNITS)	CONTINUING DOSAGE (UNITS)	UNITS IN 24 HR.	REMARKS
<b>Serious Infections</b> (staphylococcus, clostridium, hemolytic streptococcus, anaerobic streptococcus, pneumococcus, gonococcus, anthrax, meningococcus) Adults and children	15,000 to 20,000	(a) Intravenous drip: 2000 to 5000 every hr.	40,000 to 120,000 or more	(a) Dissolve ½ of 24 hr. dose in 1 liter (1000 cc.) normal saline; let drip at 30 to 40 drops per minute.
		or (b) Intramuscularly: 10,000 to 20,000 every 3 or 4 hr.	40,000 to 120,000 or more	(b) Concentration: 5000 U. per cc. normal saline.
		or (c) Intramuscular drip	40,000 to 120,000 or more	(c) Total daily dose in 250 cc. normal saline.
Infants	5000 to 10,000	3000 to 10,000 intramuscularly every 3 hr.	20,000 to 40,000 or more	Each dose in 1 or 2 cc. of normal saline.
<b>Chronically infected</b> compound injuries, osteomyelitis, etc. Adults and children	5000 to 10,000	10,000 every 2 hr. or 20,000 every 4 hr. intramuscularly or intravenously. Larger doses may be necessary at times.	40,000 to 120,000 or more	Concentration for intramuscular inj.: 5000 U. per cc. normal saline. For intravenous inj.: 1000 to 5000 U. per cc. Supplement with local treatment.
<b>Gonorrhea</b>	20,000 every 3 hr. intramuscularly for 5 doses		100,000	Results of treatment should be controlled by culture of exudate.
<b>Empyema</b> Adults and children	30,000 to 40,000 once or twice daily into empyema cavity		30,000 to 80,000	Dissolve in 20 to 40 cc. normal saline and inject into empyema cavity after aspiration of pus.
<b>Meningitis</b> Adults and children	10,000 once or twice daily into subarachnoid space or intracisternally		10,000 to 20,000	Concentration: 1000 U. per cc. normal saline.
<b>Bacterial Endocarditis</b> Adults and children	25,000 to 40,000	25,000 to 40,000 every 3 hr. intramuscularly	200,000 to 300,000	Continuous treatment for 3 weeks or longer. In a few cases the intravenous drip is more advantageous.

\*Based upon recommendations by Chester S. Keefer, War Production Board Penicillin Leaflet, Apr. 1, 1945; and by Wallace E. Herrell and Roger L. J. Kennedy, *Journal of Pediatrics*, 25:505, Dec., 1944.

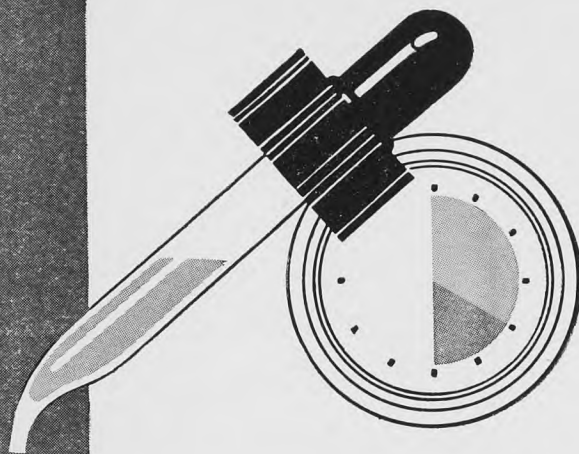


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TOMORROW'S MEDICINE FROM TODAY'S RESEARCH

## Book Reviews

### Surgery of the Hand

By Sterling Bunnell, M.D.

597 Illustrations. J. B. Lippincott Company, 1944

This book is undoubtedly the finest and most complete monograph on the hand ever published. It is complete in every detail; indeed the end result of a lifetime toil of a master craftsman. In it the author makes one realize that, next to the brain, the hand is man's greatest and most valuable asset. He has divided the book into four main sections, each quite complete in itself.

Section one deals extensively with phylogeny and comparative anatomy, special attention being drawn to the intrinsic muscles of the hand. Throughout this section he carefully correlates the hand with the remainder of the arm and shoulder girdle, stressing the fact that the latter two are integral and inseparable associated parts. In this first section also the normal hand and all its component parts are correlated in a very comprehensive manner. This section alone is worth the price of the book.

Section two deals with the reconstruction of the hand. The author has taken unusual care to stress the importance of exact reports, careful history-taking, minute and exacting examination, and recording of findings. This section should be invaluable to students and, above all, an inspiration and example to surgeons. In the latter part of this section he lays down many hard and fast rules which cannot be infringed upon if one hopes to have any measure of success in hand reconstruction. His technique is excellent, his methods in some instances unusual but based on good surgical concepts, and the part on splints is most interesting and instructive. One cannot pass by this section without mentioning his excellent treatment of the subject of keloids, Dupuytren's contracture, Volkmann's ischaemic contracture, joints, and especially the part on tendons. There are so many fundamentals in this section that one can only advise its careful and prolonged study by all those interested in hand surgery.

Section three deals with injuries and infections of the hand. This section covers a wide range of subjects, from laceration to trigger finger. This is an excellent treatise for the student and young surgeon interested in industrial surgery. It covers every conceivable type of injury, and should be a valuable and essential part of his library. The latter part of the section is a most interesting chapter on the hand in industry, based on a mass of statistics well worthy of careful study.

Section four contains the balance of hand pathology not included in the preceding section, ranging from congenital deformities to tumours of the hand.

In conclusion, one might say this book is the result of a minute, painstaking lifelong study of the hand and its afflictions. In many sections it is far beyond the student, and even the general surgeon. In it, however, are chapters that should be studied by every student, sections invaluable to the general surgeon, and in all an excellent reference book for the specialist.

A. C. A.

### Radiologic Examination of the Small Intestine

By Ross Golden, M.D.

Professor of Radiology, College of Physicians and Surgeons, Columbia University; Director of Radiologic Service the Presbyterian Hospital, New York.

A volume of 239 pages, with illustrations of 183 subjects in 75 figures. Published by J. B. Lippincott Company. Price \$8.00.

This book contains a wealth of material assembled over a period of many years from the wide personal experience of an authority in the field, and although prepared and written from the point of view of a radiologist, it includes a great deal of information useful to the physician or surgeon interested in diseases or disorders of the small intestine. Various topics include a brief discussion of anatomy, physiology and pathology before proceeding to roentgen methods and interpretation. The newer impressions regarding the transmission of nerve impulses or the "chemical mediator" theory are of particular interest. These are encountered in the study of motor disorders of the small intestine associated with diseases of the liver, spinal injuries and the mechanism of the action of morphine. Of more general interest is the chapter on the use and management of the Miller-Abbott tube in the diagnosis and treatment of ileus.

There are a large number of illustrations, all of which have been carefully selected. Most of these are reproductions of roentgen films, but there are photographs of pathological specimens as well. There is also a complete bibliography of 200 references.

This volume would make a fine addition to any library and should be read with satisfaction by anyone interested in this subject.

H. M. E.

Disease is from of old and nothing about it has changed. It is we who change, as we learn to recognize what was formerly imperceptible.

—Charcot.

Nothing is so easy as to deceive one's self; for what we wish, that we readily believe.

—Demosthenes.



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## Manitoba Medical Service

### Excerpts From Minutes of Board of Trustees Meeting of May 15th, 1945

Patients going to non-members. Though the Service has been in operation for eight months, not all practising physicians have signed contracts with the Manitoba Medical Service. Patients frequently call the office to know what their position will be if they consult such a physician, and have been told that we will pay the bill on the basis of the amount payable to members, but can give no guarantee that the doctor will not bill them for the balance. No motion was put before the meeting, but two points of view were expressed: (1) that the non-member is taking an unfair advantage of the rest of the profession, in that he receives benefits from the Manitoba Medical Service without accepting any of the responsibilities, and may collect the balance from the patient, whereas the balance owing is being carried for an indefinite period in a suspense account; (2) that if the non-member refuses to accept the token payment in settlement of his account against the patient, the Service will refuse to pay any of it."

The Board expressed the opinion that overdoing B.M.R.'s Full Blood Counts and other ancillary services, is only penalizing other doctors, as the percentage is fixed monthly on the basis of revenue to expenditures.

Dermatologists will be paid \$5.00 for the first consultation, and not the General Practitioner's fee plus 25%.

Doctors are still sending or bringing their patients to hospitals for purely diagnostic procedures, in spite of all the notices that have been sent to the profession by the Manitoba Hospital Service Association and the Manitoba Medical Service. The former will only provide for a patient admitted to a hospital for treatment; the latter pays doctors only and not institutions. When patients complain to us, as they frequently do, we have to tell them that their doctor misled them by not having made himself familiar with the regulations, and they must take the matter up with him. Doctors are sending in their reports with no group or contract numbers and no diagnosis. The latter was referred to in an earlier number of *The Review*; please read it. If doctors attending pregnancy cases would put the date of the last menstrual period, it would save them the trouble of answering enquiries.

By authority of the Fee Schedule Committee of the Executive Committee of the Manitoba Medical Association, the fee for the first B.M.R. on a patient will be \$5.00; repetition of the test will be \$3.00. If two separate immunizing injections are given at one office call, the fee for the first call will be \$2.00, and for the second \$1.00.

\$1,700.00 worth of accounts were penalized last month; the reaction of members of the profession was so marked, that it is likely this method of getting accounts in early can soon be dispensed with.

The growth of membership remains steady; the number as at April 30th being 13,671. B plan still remains much the most popular.

E. S. Moorhead, M.B.,  
Medical Director.

## Why Manitoba Medical Service Came into Being

### A Review From Dr. Ross Mitchell

Until the world-wide depression descended late in 1929 Manitoba physicians gave little thought to economic or social problems. To them the public was made up of two classes, paying patients and charity patients. In the cities the latter class was attended for the most part in the public wards or out-patient departments of hospitals.

This arrangement was fairly satisfactory, especially for well-established doctors, but by 1932 the number of indigents had so increased that doctors were working harder than ever for continually shrinking returns. The condition became so acute that the Manitoba Medical Association bestirred itself. A deputation from that body waited on Hon. T. G. Murphy, Minister of the Interior in the Dominion Government. To a request from the deputation that the Federal Government should give financial assistance in the provision of medical care to indigents, Mr. Murphy countered by asking what the incidence of disease among the indigents would be. No one could answer the question, and the deputation went off metaphorically with its tail between its legs. Reflection made them realize that the answer could be found only by experience. Later a group appealed to Hon. John Bracken, Premier of Manitoba, for provincial help in providing medical care to indigents. His reply was that this was the duty of municipalities. Meetings were then arranged between the M.M.A. executive and members of the Winnipeg City Council. Finally the Council agreed to pay for medical care of its citizens on unemployment relief. The fee schedule for this scheme was roughly half the ordinary schedule, so that doctors assumed the other half of the burden. However, the scheme worked smoothly on the whole for the years it was in operation. The data regarding illness was carefully tabulated and gave valuable information on the incidence of illness in that group.

About this time the British Columbia Government passed a health insurance measure, but the



doctors of that province raised such opposition to obnoxious provisions in the Act that it was never enforced. The Manitoba Medical Association, warned by this, appointed a Committee on Economics to study and report on medical economic and sociological problems in this province.

The Winnipeg Firefighters Club approached the Manitoba Medical Association in 1940 with a request that medical care be provided for themselves and their dependents on a prepayment basis. As a result the Firefighters' scheme was set up and continues to function. Here, again, valuable experience has been gained. Several other wage-earning groups requested similar schemes. The Committee on Economics, after much deliberation, recommended to the M.M.A. executive that a voluntary prepayment medical service be set up with the Manitoba Hospital Service Association, already well established, as the agent to sell contracts. After much discussion the Manitoba Medical Association accepted the recommendation.

Late in 1941 it was announced that the Dominion Ministry of Pensions and National Health was considering a national health insurance scheme. The M.M.A. executive thought that it was imperative that practical experience be obtained through the working out of a medical scheme on a limited scale. Meetings of the medical profession of Winnipeg were held, and it was decided to institute Manitoba Medical Service. Provincial directors were appointed in 1942, an act of incorporation secured, and by-laws prepared. In September, 1944, the selling of contracts began, and Manitoba Medical Service is now a going concern, with 10,000 subscribers.

Lest one think that Manitoba was the only province thinking of medical economics, it must be recalled that from 1930 on the presidents of the Canadian Medical Association have urged their medical brethren to study this problem and to acquaint themselves with the world-wide demand for extension of medical care. Our own Dr. Harvey Smith was a firm believer in the value of voluntary medical insurance. The late Dr. A. S. Munro of Vancouver, in his presidential address to the C.M.A. (C.M.A. Journal, July, 1932), stated:

"The insurance principle, as applied to Health Service, is both logical and sound. It enables the uneven cost of individual sickness to be spread over the group; the experience of numerous industrial medical aid organizations affords ample proof of this."

The advantages of a prepayment medical scheme may be summed up:

#### For the Employee

- (1) Protection against catastrophic illnesses or operations.
- (2) Ability to budget income.
- (3) Social security and ease of mind.

#### For the Employer

Greater efficiency through lessened absenteeism of staff.

#### For the Doctor

(1) Greater volume of work, since examination of recruits and high school students has revealed an astonishing amount of physical unfitness largely remedial. Experience of Unemployment Relief Scheme and Firefighters' Scheme has shown a back-log of surgery previously not undertaken because of lack of funds.

(2) Disease seen in its incipency rather than when well advanced.

(3) Assured payment.

(4) Experience with the operation of a medical prepayment scheme, thus enabling the profession to speak with authority.

(5) Provision of work for medical men returning from service overseas.

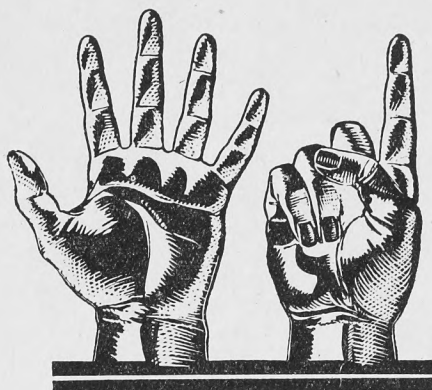
#### For the Community

(1) The benefit of a co-operative non-profit enterprise.

(2) Promotion of economic stability.

At the end of World War I Winnipeg had the unenviable experience of the general strike of 1919. Medical officers coming home from service overseas then found Winnipeg for a few days almost in a state of anarchy, with all essential services disrupted. The strike was put down only after bloodshed and a bitterness which persists to this day. The best way to avoid a repetition of a general strike at the close of this war is for the community now to engage in co-operative schemes to provide social security. The head of a household who is contributing to a plan which assures proper medical care for himself and his family when he wants it, and not when he can afford it, is not likely to kick over the apple cart and upset the established order.





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*without any delay* after application.
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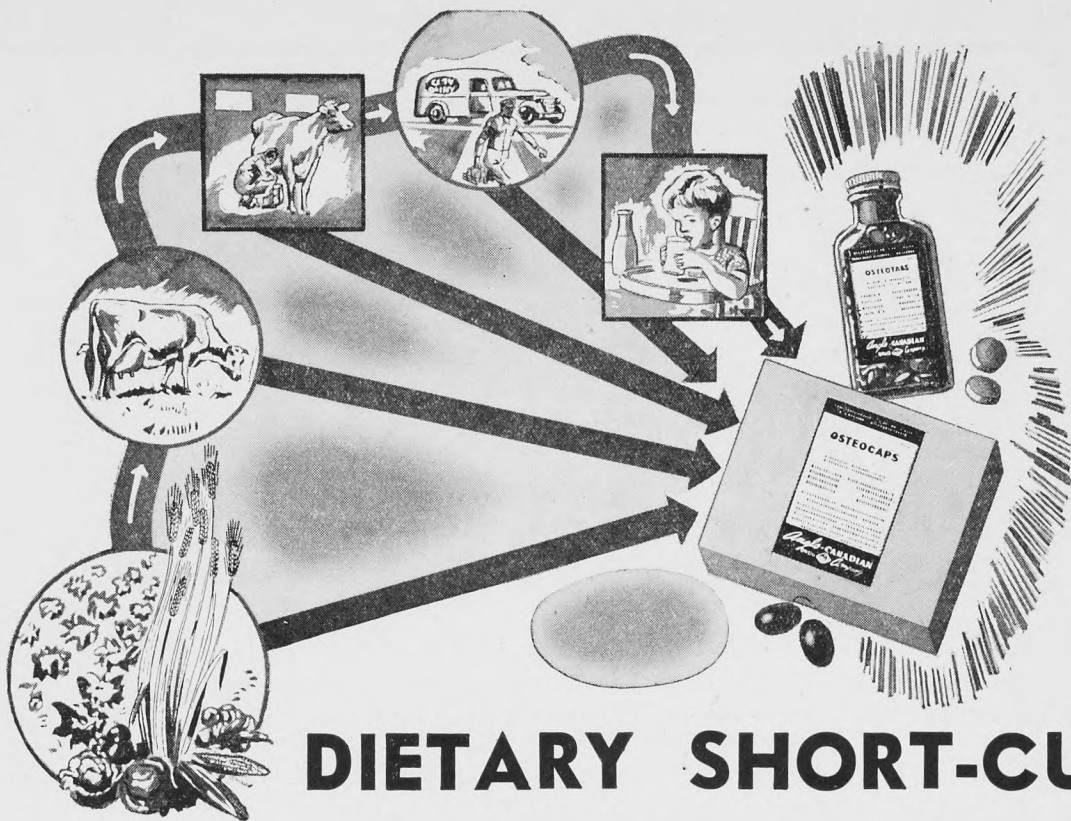
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## Personal Notes and Social News

Dr. J. D. McQueen is pleased to announce the association in his practice of Doctor (Major) Cherry Bleeks. Major Bleeks commenced civil practice March 1st, 1945, after five years' overseas service in England and Sicily.

Dr. W. J. Wood, former Assistant Medical Officer for the City of Winnipeg, has been appointed chief of the Medical Supply section of the United Nations Rehabilitation Relief Administration.

Dr. and Mrs. V. F. Onhauser wish to announce the engagement of their daughter, Vera Jean, to Charles Douglas Inman, son of Mr. and Mrs. H. Inman, of Winnipeg. The wedding to take place on June 14th, 1945.

Major A. R. Tanner, formerly of Gunnar Gold Mines, has returned from overseas service with the R.C.A.M.C. after five years' service, with action in Italy and Sicily.

Dr. and Mrs. H. Geller are happy to announce the birth of a daughter (Dianna Louise) on May 15, 1945, at the Misericordia Hospital, Winnipeg.

Major Paul K. Tisdale, R.C.A.M.C., only son of Dr. and Mrs. J. E. Tisdale, of Winnipeg, is engaged to be married to Lieut. Nursing Sister Elizabeth Isobel, only daughter of W. M. Neal, C.B.E., and Mrs. Neal, of Montreal, Que. The wedding to take place early in June. Major Tisdale recently returned from overseas after five years' service, having been in action in Sicily and Italy.

Dr. C. E. Mather, formerly with Department of Health and Public Welfare, has joined the staff of the Canadian National Railways.

Major G. S. Baldry has returned to the East coast after spending a short leave with his family in Winnipeg.

Dr. and Mrs. A. E. Medd's elder daughter, Eva Marie, was married to Mr. Martin Olson, son of the late Mr. and Mrs. E. Olson, of Spy Hill, Sask., on May 19th, 1945, at the Manse of the United Church, St. Vital, Man.

Dr. Joseph Gonty is leaving Winnipeg to take up practice at Saltcoats, Sask.

Dr. Elizabeth V. Lautsch has taken over the practice of Dr. D. G. Ross, who recently retired from active practice at Selkirk, Man.

Captain J. Barclay Cram, recently returned from overseas service with the R.C.A.M.C., is again in civil practice as an associate with the Abbott Clinic.

### Praises Winnipeggers In Medical Unit

"Winnipeg men formed the majority of personnel at the 12th Canadian field dressing station, one of the finest groups of men ever assembled for the work we had to do," said Major Basil D. Robertson, of Montreal, who recently returned to Canada as a civilian.

In a letter to the Free Press, Major Robertson said that frequently the merits of medical units pass unnoticed. However, the men under his command, he said, became the most efficient unit in the division in which they served, and were presented with the Ram trophy, for efficiency in all departments, from smartness of appearance to maintenance of equipment.

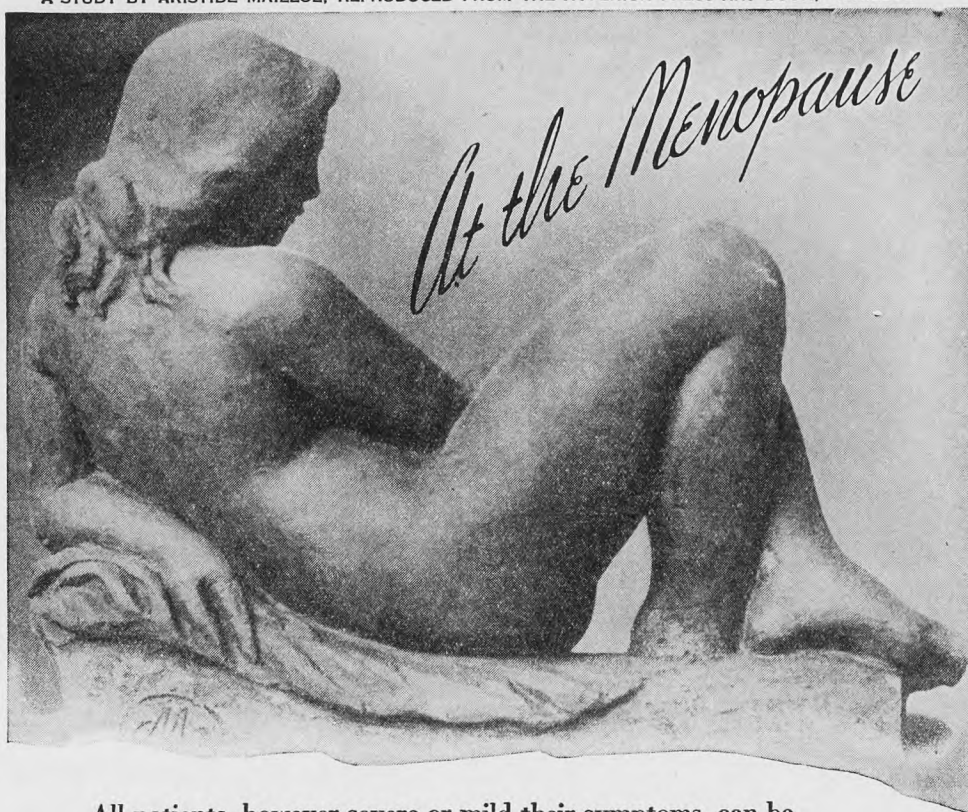
"During the liberation of France, every member of the unit carried on under the most difficult circumstances, and many Canadian, British and Polish owe their lives today to the care of these officers and men," he said. Major Robertson was the first commanding officer of the unit, but left them in September, 1944. — Winnipeg Free Press, May 3rd, 1945.

The actions of men are the best interpreters of their thoughts.—Locke.

Physicians, like beer, are best when they are old.—Thomas Fuller.



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CANADA



## Department of Health and Public Welfare

### Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1945		1944		TOTALS	
	Mar. 25 to Apr. 21	Feb. 25 to Mar. 24	Mar. 26 to Apr. 22	Feb. 27 to Mar. 25	Jan. 1 to Apr. 21, '45	Jan. 1 to Apr. 22, '44
Anterior Poliomyelitis	1	—	—	—	3	1
Chickenpox	155	210	187	304	837	1,077
Diphtheria	22	29	11	16	126	46
Diphtheria Carriers	1	2	1	4	20	12
Dysentery—Amoebic	—	—	—	—	—	—
Dysentery—Bacillary	—	—	—	—	1	—
Erysipelas	8	8	8	8	25	31
Encephalitis	—	1	—	—	2	2
Influenza	4	6	23	45	46	165
Measles	39	26	1,265	797	180	2,450
Measles—German	3	1	41	70	11	169
Meningococcal Meningitis	1	2	5	1	8	11
Mumps	179	227	240	351	646	1,137
Ophthalmia Neonatorum	—	—	—	—	—	—
Pneumonia—Lobar	5	3	23	20	25	93
Puerperal Fever	—	—	1	1	—	3
Scarlet Fever	42	96	314	346	292	1,207
Septic Sore Throat	—	2	5	5	6	15
Smallpox	—	—	—	—	—	—
Tetanus	—	—	—	—	—	—
Trachoma	—	—	—	—	—	—
Tuberculosis	50	44	39	60	162	177
Typhoid Fever	2	2	23	4	23	27
Typhoid Paratyphoid	—	—	—	—	2	—
Typhoid Carriers	1	1	—	—	2	—
Undulant Fever	—	1	—	—	2	1
Whooping Cough	38	15	23	43	131	129
Gonorrhoea	143	163	144	93	548	537
Syphilis	56	45	55	55	208	200
Actinomycosis	—	—	1	1	—	2

### DEATHS FROM COMMUNICABLE DISEASES

February, 1945

DISEASES (white cases only)	*726,000 Manitoba	*3,325,000 Ontario	*906,000 Saskatchewan	*2,972,300 Minnesota	*641,335 North Dakota
Anterior Poliomyelitis	1	—	2	—	—
Chickenpox	155	958	102	—	94
Diphtheria	21	7	10	6	3
Diphtheria Carriers	1	—	1	—	—
Dysentery—Amoebic	—	—	—	9	—
Bacillary	—	—	—	1	—
Encephalitis, Epidemica	—	1	—	—	1
Erysipelas	8	3	—	—	—
Influenza	4	196	—	5	12
Jaundice—Infectious	—	21	—	—	—
Measles	39	455	153	55	19
Measles—German	3	99	5	—	—
Meningococcal Meningitis	1	2	1	14	1
Mumps	179	521	167	—	—
Ophthalmia Neonatorum	—	—	—	—	—
Puerperal Fever	—	—	—	—	—
Scarlet Fever	42	258	43	396	117
Septic Sore Throat	—	3	—	—	—
Smallpox	—	—	—	—	2
Trachoma	—	—	—	—	—
Tuberculosis	44	196	39	3	17
Typhoid Fever	2	1	—	—	—
Typhoid Fever Carriers	1	—	—	—	—
Typhoid Paratyphoid Fever	—	—	—	—	—
Undulant Fever	—	8	—	15	1
Whooping Cough	38	169	17	36	2
Gonorrhoea	143	553	—	—	28
Syphilis	56	354	—	—	13

\*Approximate Populations.

**Urban**—Cancer, 35; Pneumonia (other forms), 12; Tuberculosis, 6; Diphtheria, 5; Syphilis, 2; Typhoid Fever, 2; Influenza, 1; Pneumonia Lobar, 1; Septicemia, 1. Other deaths under 1 year, 20. Other deaths over 1 year, 186. Stillbirths, 12. Total, 283.

**Rural**—Cancer, 24; Pneumonia (other forms), 12; Pneumonia Lobar, 6; Tuberculosis, 4; Influenza, 2; Diphtheria, 1; Scarlet Fever, 1. Other deaths under 1 year, 11. Other deaths over 1 year, 90. Stillbirths, 8. Total, 159.

**Indians**—Measles, 2; Cancer, 1\*; Tuberculosis, 1; Whooping Cough, 1. Other deaths under 1 year, 1. Other deaths over 1 year, 4. Stillbirths, 0. Total, 10.

\*White on Indian Reserve.

**Diphtheria**—With 21 cases reported in Manitoba shows much too high an incidence.

**Smallpox**—With 2 cases reported in North Dakota indicates that Smallpox has not been completely wiped out.

Our April weather this year, and the bad roads caused by it, have not been encouraging to carry on immunization Clinics in rural areas. However, these might be planned now for a start in September. Get them young, treat them gently and don't forget that they need augmenting or reinforcing doses!



# PENICILLIN THERAPY

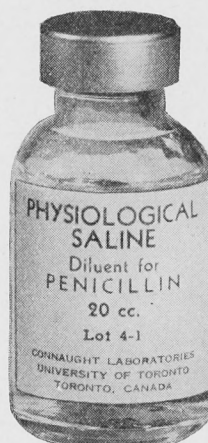
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## Department of Health and Public Welfare

### Community Health Units for Rural Manitoba

The foundation of the Government's proposals for the improvement of the health of the citizens of Manitoba is the establishment of adequate Preventive Medical Services for everyone in our province, no matter where he or she may live. To accomplish this the province has been divided into districts called "Full Time Health Units." Each unit consists of three or more municipalities containing a total population of from 12,000 to 20,000 or more persons.

The staff of the unit will consist of a Medical Director with special training in Public Health and Preventive Medical Practice; Public Health Nurses, one for every 5,000 persons, also with special training; a Sanitary Inspector and one or more office clerks, depending on the size of the unit. All members of the unit staff will be on a full time basis, and will spend all their time carrying out the work of the unit. The Medical Director will be in charge of the unit, and the Health Officer for each of the municipalities in the unit. He will carry out the provisions of the Health Act for the control of communicable disease, the improvement of sanitation and the supervision of dairies, restaurants and other establishments which prepare or offer milk or food for sale. He will be responsible for organizing and conducting immunization programs for the prevention of smallpox, diphtheria, whooping cough, typhoid fever and scarlet fever. He will establish regular Child Health and Pre-Natal Clinics at selected centres of his unit. He will make arrangements for holding Tuberculosis Clinics in co-operation with the Travelling Clinic Services of the Manitoba Sanatorium Board. As and when required he will obtain Mental Hygiene Clinics through the Mental Health Service of the Department of Health and Public Welfare. The doctor will also be expected to promote a health education program in his district. Every school child in his area will have regular examinations in order to try and insure that all children are as physically and mentally fit as possible, in order that they may be able to take the fullest advantage of the education being provided for them.

In carrying out the provisions of the Health Act, particularly as these apply to Sanitation and Food Control, the Medical Director will depend on the assistance of the Sanitary Inspector, who is especially trained for this work. The Inspector will regularly visit all dairies providing milk for the town or towns in the area, making sure that the milk is clean and safe to use. He will also inspect and license slaughter houses, visit and inspect restaurants and eating places, and assist

the proprietors of these establishments in providing clean, wholesome food for their customers. He will be responsible for seeing that all public water supplies are safe to use. His services will be available to assist anyone in the community in planning for the improvement in the sanitation of the home.

The Public Health Nurses will assist the Medical Director in all his clinic activities, including immunization programs, and will also help him in carrying out the school health services. Their most important function in all the unit activities will be to visit the homes of the families in their district, to assist parents in obtaining the maximum of good health for all members of the family. The nurse will be the most important person in the unit staff for bringing into the homes the value of the unit activities.

The clerical staff of the unit will be responsible for keeping records of all the unit activities so that the work of the doctor, nurses and sanitary inspector can be reviewed from time to time to insure an adequate health and preventive service for all residents in the unit area.

To assist and direct the operation of the unit there will be established in each unit a local board consisting of from five to seven members, depending on the size of the unit. This board will be composed of residents of the several municipalities composing the unit, and will meet regularly each month to go over the work being performed, and suggest where the services can be improved and extended. They will also go over the expense accounts and approve them for payment.

The work of the staff of the unit will be under the direct supervision of a special division of the Department of Health and Public Welfare, the Division of Local Health Services. By this means the unit will be assured of a high standard of service.

The cost of operating a unit is approximately \$1.00 per person per year, so it will cost \$15,000 a year to operate a unit of 15,000 population and provide the services outlined. Of every dollar required to provide Full Time Health Services the Government will pay 65 cents, the municipalities being required to pay the remaining 35 cents, this to be paid by the municipalities on a population basis.

The province will also provide the money required to furnish and equip the unit offices.

We believe "an ounce of prevention is worth a pound of cure"; that is why we urge all communities to take advantage of these services being offered by the Government, and for which the



Government is prepared to pay the largest part of the cost. We believe we should first do everything we can to prevent disease and promote health, and in this way ultimately reduce to the minimum the necessity for providing services for the cure of disease. That is why in the Government's Proposals for the "Improvement of the Health of Manitoba's Citizens" Full Time Health Service is considered the foundation of the plan.

## Diagnostic Facilities and Medical Care

When any community has provided for Full-time Health Services as outlined in the previous article on the Manitoba Health Plan, they are entitled to apply to the Government for diagnostic services for their residents. Under the Plan the Government propose to establish these in the local General Hospitals, there being at least one of such hospitals in each Local Full-time Health Unit area.

The services to be provided under this part of the Plan would consist of all the usual X-ray examinations and laboratory tests required, so that the physician can readily make an accurate diagnosis of disease.

This will serve two purposes:

1. It will make it unnecessary for the individual, except in exceptional cases, to leave his own community for a proper examination.
2. It will make it possible for every rural physician to practise scientific medicine, and should materially assist in having young, well-trained medical men locate in our rural areas.

The method of making these services available will be as follows:

In every General Hospital in the Province the Government will install a well-equipped X-ray department, providing a modern X-ray machine with all the necessary accessories, so that all but a few of the most complicated X-ray plates can be taken. The Government will also provide all the equipment required for the operation of a satisfactory laboratory to do all the required blood tests, tissue examinations, etc., which are now essential to the scientific practise of medicine.

The Government will provide the funds for the purchase and installation of the equipment required and will replace it when such is necessary.

In the small General Hospitals a specially trained technician will be provided to operate the X-ray machine and do the laboratory tests. Each district hospital will have consultant services in both X-ray and laboratory work available from the larger area hospital through medical men trained in radiology and laboratory services.

The diagnostic services which are provided at the request of the person's own physician will be

given free, except for a small service charge for X-ray plates. It is suggested that this should be \$1.00 for the first plate and 25 cents for any subsequent plates. The total charge to the individual not to exceed \$5.00 for any one illness.

It is estimated that the cost of providing these services, over and above the service charge, will be 50 cents per person per year, of which the Government will provide 33 cents, the balance being provided by the municipality.

If these facilities are going to be properly utilized to diagnose disease early, so that it can be effectually treated, medical care must be readily available, and we believe that to obtain such service, particularly in our rural areas, it will be necessary in many instances to have some arrangement for paying the doctor in advance.

This brings up the third principle of the Government's Health Plan: Medical Care. We believe that every community in Manitoba should have at least a general practitioner or family doctor, so that every person who takes sick may have medical care readily available. If the doctor is to serve the people effectively and be content to remain in a rural area it is essential that he have adequate remuneration. We think that this can best be assured by some arrangement between the community and the doctor, whereby his services are paid for in advance. The Plan provides that this may be done either by way of a salary or so much per head per year of population in the district, or by some arrangement for payment for services rendered. We think that the only satisfactory way to do this is for the municipality to raise the money required to pay for the services either by a land tax or by the special health levy as provided in the new Health Services Act. If a municipality does make arrangements for payment of medical care for its residents in advance as suggested, the Government will contribute one-sixth of the cost to a maximum of 50 cents per year for each resident of the municipality. To be entitled to this contribution for medical care the municipality must first have entered fully and co-operatively into the Plan for Full-time Health Services and diagnostic facilities.

We believe that when every community in our province has provided their residents with Full-time Health Services, diagnostic facilities and general practitioner services, that all illness will be reduced and serious illness materially lessened. Sick people will not need to go out of their own community for adequate health services or medical care except for those rare conditions that require special treatment that can only be provided at the larger hospitals.



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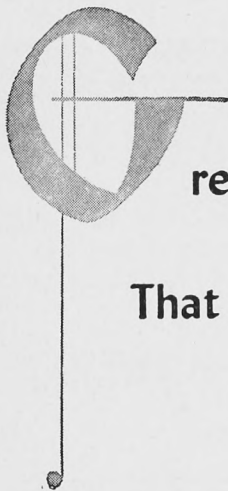
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